





## Advanced Master's Degree

Technology Project Management within the Company

Course Modality: Online

Duration: 2 years

Accreditation TECH Technological University

Official No of hours: 3,000 h.

 ${\tt Acceso~web:} \textbf{www.techtitute.com/escuela-de-negocios/grand-master/grand-master-gestion-proyectos-tecnologicos-empresa}$ 

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# 01 **Welcome**

The success of a company depends, to a large extent, on the projects that are carried out and, consequently, in order to be successful, they must be properly managed. This process is even more important when it comes to technology projects, since these move in complex and changing environments, so it is necessary for professionals in the sector to be trained to adapt to these changes. This program in Technology Project Management within the Company has been created to train professionals in the management and direction of technology projects. Quality content which is up to date with the latest developments is the base that will allow you to develop your skills in this field to become a true professional.









## tech 08 | Why Study at TECH?

#### At TECH Technological University



#### **Innovation**

The university offers an online learning model that combines the latest educational technology with the most rigorous teaching methods. A unique method with the highest international recognition that will provide students with the keys to develop in a rapidly-evolving world, where innovation must be every entrepreneur's focus.

"Microsoft Europe Success Story", for integrating the innovative, interactive multi-video system.



#### The Highest Standards

Admissions criteria at TECH are not economic. Students don't need to make a large investment to study at this university. However, in order to obtain a qualification from TECH, the student's intelligence and ability will be tested to their limits. The institution's academic standards are exceptionally high...

95%

of TECH students successfully complete their studies



#### **Networking**

Professionals from countries all over the world attend TECH, allowing students to establish a large network of contacts that may prove useful to them in the future.

100,000+

200+

executives trained each year

different nationalities



#### **Empowerment**

Students will grow hand in hand with the best companies and highly regarded and influential professionals. TECH has developed strategic partnerships and a valuable network of contacts with major economic players in 7 continents.

500+

collaborative agreements with leading companies



#### **Talent**

This program is a unique initiative to allow students to showcase their talent in the business world. An opportunity that will allow them to voice their concerns and share their business vision.

After completing this program, TECH helps students show the world their talent.



#### **Multicultural Context**

While studying at TECH, students will enjoy a unique experience. Study in a multicultural context. In a program with a global vision, through which students can learn about the operating methods in different parts of the world, and gather the latest information that best adapts to their business idea.

TECH students represent more than 200 different nationalities.



TECH strives for excellence and, to this end, boasts a series of characteristics that make this university unique:



#### **Analysis**

TECH explores the student's critical side, their ability to question things, their problem-solving skills, as well as their interpersonal skills.



#### **Academic Excellence**

TECH offers students the best online learning methodology. The university combines the Relearning method (a postgraduate learning methodology with the highest international rating) with the Case Study. A complex balance between tradition and state-of-the-art, within the context of the most demanding academic itinerary.



#### **Economy of Scale**

TECH is the world's largest online university. It currently boasts a portfolio of more than 10,000 university postgraduate programs. And in today's new economy, **volume + technology = a ground-breaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.



#### Learn with the best

In the classroom, TECH's teaching staff discuss how they have achieved success in their companies, working in a real, lively, and dynamic context. Teachers who are fully committed to offering a quality specialization that will allow students to advance in their career and stand out in the business world.

Teachers representing 20 different nationalities.



At TECH, you will have access to the most rigorous and up-to-date case studies in the academic community"





## tech 12 | Why Our Program?

This program will provide students with a multitude of professional and personal advantages, particularly the following:



#### A significant career boost

By studying at TECH, students will be able to take control of their future and develop their full potential. By completing this program, students will acquire the skills required to make a positive change in their career in a short period of time.

70% of participants achieve positive career development in less than 2 years.



## Develop a strategic and global vision of companies

TECH offers an in-depth overview of general management to understand how each decision affects each of the company's different functional areas.

Our global vision of companies will improve your strategic vision.



#### Consolidate the student's senior management skills

Studying at TECH means opening the doors to a wide range of professional opportunities for students to position themselves as senior executives, with a broad vision of the international environment.

You will work on more than 100 real senior management cases.



#### Take on new responsibilities

The program will cover the latest trends, advances and strategies, so that students can carry out their professional work in a changing environment.

45% of graduates are promoted internally.



#### Access to a powerful network of contacts

TECH connects its students to maximize opportunities. Students with the same concerns and desire to grow. Therefore, partnerships, customers or suppliers can be shared.

You will find a network of contacts that will be instrumental for professional development.



#### Thoroughly develop business projects

Students will acquire a deep strategic vision that will help them develop their own project, taking into account the different areas in companies.

20% of our students develop their own business idea.



#### Improve soft skills and management skills

TECH helps students apply and develop the knowledge they have acquired, while improving their interpersonal skills in order to become leaders who make a difference.

Improve your communication and leadership skills and enhance your career.



#### Be part of an exclusive community

Students will be part of a community of elite executives, large companies, renowned institutions, and qualified professors from the most prestigious universities in the world: the TECH Technological University community.

We give you the opportunity to train with a team of world renowned teachers.





## tech 16 | Objectives

Your goals are our goals.

We work together to help you achieve them.

This Professional Master's in Technology Project Management within the Company will train you to:







Understand the importance of corporate social responsibility as an essential part of any project



Develop the ability to predict in environments of high uncertainty



Learn to generate ideas that add value to organizations





Identify non-value-added tasks to be eliminated



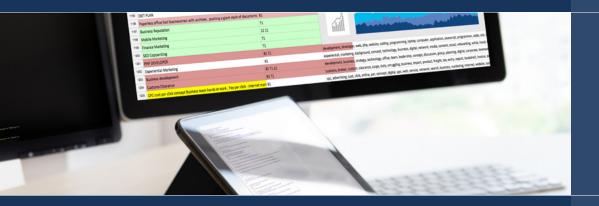
Know how to break down the strategy into portfolios, programs and projects



Develop the ability to manage several projects at the same time



Know how to prioritize and delay projects and ideas within an organization



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Develop skills and abilities necessary to make decisions in all types of projects, especially technological projects, multidisciplinary contexts and environments.



Know how to distribute workloads of shared resources among several projects



Develop the ability to analyze and diagnose business and management problems in the different areas of knowledge of project management



Master advanced business management tools to identify and anticipate opportunities, allocate resources, organize information, select, motivate and manage people, make decisions, achieve proposed objectives and evaluate results



Take responsibility and think in a transversal and integrative way to analyze and solve situations in uncertain environments





Provide a global and strategic vision of all operational departments of the company



Develop the minutes of incorporation of technology projects



Carry out a comprehensive control of all projects



Evaluate the processes and estimate the cost of developing a technology project





Knowing how to estimate the time needed in each process of project design and development



Give importance to the quality of the projects

31

Understanding the cost of failing to meet project quality

32

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.





34

Knowing the emerging trends in the market

35

Develop communication skills

36

Understanding and managing the risks of technology projects.

















### tech 32 | Structure and Content

#### **Syllabus**

This Professional Master's Degree in Technology Project Management within the Company from

TECH Technological University is an intensive program that prepares the professional to face challenges and business decisions both nationally and internationally. Its content is designed to promote the development of managerial skills that enable more rigorous decision-making in uncertain environments.

Throughout 3,000 hours of study, a multitude of practical cases will be analyzed through individual work, achieving a contextual learning that will be very useful for transferring it to the professional's daily practice. It is, therefore, an authentic immersion in real business situations.

This Professional Master's Degree in Technology Project Management within the Company deals in depth with different areas of the company and is designed for managers to understand the management of technology projects from a strategic, international and innovative perspective.

A plan designed for the professional, focused on professional improvement and that prepares him/her to achieve excellence in the field of management and business management. A program that understands your needs and those of your company through innovative content based on the latest trends, and supported by the best educational methodology and an exceptional faculty, which will provide you with the competencies to solve critical situations in a creative and efficient way.

This program is developed over 24 months and is divided into two blocks and 19 modules:

Module 1	Strategic Project Management
Module 2	Project Scope and Schedule
Module 3	Project Financial Management
Module 4	Recruitment and Project Quality
Module 5	People and Resource Management
Module 6	Innovative Organizations and Projects
Module 7	Agile Methodologies
Module 8	PMO
Module 9	Project Risk Management
Module 10	Introduction to Project Finance

Module 11	Introduction to technology project design and management and technology project integration management
Module 12	Scope management of technology projects
Module 13	Time management of technology projects
Module 14	Cost management of technology projects
Module 15	Quality management of technological projects
Module 16	Management of technology project resources
Module 17	Communications and stakeholder management for technology projects
Module 18	Technology project procurement management
Module 19	PMP® or CAPM® certification and code of ethics. Emerging trends and practices in technology project management and governance

#### Where, When and How is it Taught?

TECH offers the possibility of developing this program completely online. During the 24 months of training, the professional will be able to access all the contents of this program at any time, which will allow the student to self-manage study time.

A unique, key, and decisive educational experience to boost your professional development and make the definitive leap.

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Mod	<b>ule 1.</b> Strategic Project Management						
1.1.	Strategic Project Management and	1.2.	Competitive Business Strategy	1.3.	Corporate Business Strategy	1.4.	Project Management Framework
	the Company					1.5.	Integration and Knowledge
	Management		Management		Training Management	1.9.	Project Communication
1.6.	Areas of Knowledge in Project	1.7.	Project Change Management:	1.8.	Stakeholder Management		Management
1.10.	Traditional and Innovative Methodologies						
Mod	ule 2. Project Scope and Schedule						
2.1.	Program and Project Portfolio Management	2.2.	Project Scope Management	2.3.	Requirements Gathering and Scope Definition	2.4.	Breakdown of Project Objective into Activities (WBS)
2.5.	Validate and Control the Scope	2.6.	Strategic Time Planning in Project Management	2.7.	Project Life Cycle	2.8.	Efficient Time and Deadline Planning
2.9.	Task Estimation Tools						
2.10.	Schedule Execution and Control						
Mod	ule 3. Project Financial Management						
	,						
3.1.	Financial Plan	3.2.	Financial Model	3.3.	Project Viability Analysis	3.4.	Project Sensitivity Management
						3.5.	Project Cost Management
3.6.	Project Cost Estimation	3.8.	Economic Analysis of Decisions	3.10.	Digital Tools and Systems for		
3.7.	Project Cost Control - EVM	3.9.	Ms Project Tools		Project Management		
	•		•				

<b>Module 4.</b> Recruitment and Project Quality						
<ul><li>4.1. Acquisition Planning</li><li>4.2. Supplier Search Planning</li></ul>	4.3. 4.4.	Supplier Relationship Management Legal Aspects of Recruitment	4.5.	Contract Management and Administration	4.6. 4.7.	Project Sale Management Lean Management
4.8. Process Improvement Techniques	4.9.	Total Quality Management and Advanced Project Management	4.10	. Lean Tools for Project Management		

Mod	lule 5. People and Resource Managen	ment				
5.1.	Organizational Culture	5.2. Organization Management	5.3.	Talent Management and Commitment	5.4.	Motivation
5.5.	People Management and the Project Manager	5.6. Corporate Responsibility	5.7.	Professional Ethics	5.8.	Executive Skills and Management Techniques of the Project Manager
5.9.	Negotiation	5.10. Management of Project Resource	es			
Mod	<b>lule 6.</b> Innovative Organizations and P	Projects				
6.1.	Organizational Change	6.2. Communication in Organizations	6.4.	Process Engineering and Product	6.5.	Strategic Innovation Intelligence
	Management	6.3. Creative Thinking: Innovation		Engineering	6.6.	Entrepreneurship and Innovation
6.7.	Launch and Industrialization of New Products	6.8. R+D+I Management Systems		Direction and Management of R+D+I Projects	6.10	. Project Management for Startups

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Mod	<b>ule 7.</b> Agile Methodologies						
7.1.	Introduction to Agile Methodologies	7.2.	Iterative, Adaptive, Predictive and Hybrid Lifecycles	7.3.	Introduction to Scrum	7.4.	Agile Team Management
7.5.	Scrum Events	7.6.	Artifacts in Scrum	7.7.	Agile Estimating and Planning	7.8.	Metrics
7.9.	Collaborative Tools	7.10.	Organizational Agility				
Mod	ule 8. PMO						
8.1.	Introduction to the Project Management Office	8.2.	Functions of the Project Management Office	8.3. 8.4.	Creating the Conditions for Change Leading Organizational Change PMO Vision and Strategy	8.5. 8.6.	PMO Model Design PMO Resource Plan
8.7. 8.8.	PMO Implementation PMO Operation and Tools	8.9.	Project Management Culture and Knowledge Management in the Organization	8.10.	Agile PMO		
Mod	ule 9. Project Risk Management						
9.1. 9.2.	Introduction to Risk Management Project Risk Management Planning	9.3. 9.4.	Risk Identification Qualitative Risk Analysis	9.5. 9.6.	Risk Prioritization Quantitative Risk Analysis	9.7.	Scenario Analysis and Risk Response Plans
9.8. 9.9.	Implementation of Risk Response Risk Monitoring and Control	9.10.	Lessons Learned and Knowledge Management				

Module 10. Introduction to Project Finance						
10.1. Introduction to corporate finance	10.2. Financial statements and cash flows	10.3. El Value of Money and Discounted Cash Flows	<ul><li>10.4. Fixed income and its valuation</li><li>10.5. Equities and their valuation</li></ul>			
10.6. Financial investment criteria: capital budgeting	10.7. Project analysis	10.8. Risk and return: the cost of capital 10.9. Liability structure	10.10. Treasury and International Financ			
Module 11. Introduction to technology proje	ect design and management and technology	project integration management				
<ul> <li>11.1. Introduction to technology project management</li> <li>11.1.1. The role of the project manager</li> <li>11.1.2. Project definition</li> <li>11.1.3. Organizational structure</li> </ul>	<ul> <li>11.2. Project management, program management and portfolio management</li> <li>11.2.1. Portfolios, programs and projects</li> <li>11.2.2. Strategic Management</li> </ul>	<ul> <li>11.3. Standards and best practices for the management of technology projects</li> <li>11.3.1. Prince2.</li> <li>11.3.2. PMP</li> <li>11.3.3. ISO 21500:2012</li> </ul>	<ul> <li>11.4. Organizational influences on the design and management of technology projects.</li> <li>11.4.1. Environmental factors of a company 11.4.2. Assets of an organization's processes</li> </ul>			
11.5. Technology project management processes 11.5.1. Life cycle of technology projects 11.5.2. Process groups 11.5.3. Dynamics of process groups	<ul> <li>11.6. Development of the technology project constitution act</li> <li>11.6.1. Definition of the charter of incorporation of technology projects</li> <li>11.6.2. Tools and techniques</li> </ul>	<ul> <li>11.7. Development of the plan for the design and management of technological projects.</li> <li>11.7.1. Definition of the plan for the design and management of technological projects.</li> <li>11.7.2. Tools and techniques</li> </ul>	<ul> <li>11.8. Knowledge management of technological projects</li> <li>11.8.1. Importance of knowledge management in technology projects</li> <li>11.8.2. Tools and Techniques</li> </ul>			
<ul> <li>11.9. Monitoring the work of technology projects</li> <li>11.9.1. Work monitoring and control</li> <li>11.9.2. Follow-up reports on technology projects</li> <li>11.9.3. Tools and Techniques</li> </ul>	<ul> <li>11.10. Integrated control of changes in technological projects</li> <li>11.10.1. Objectives and benefits of project change control</li> <li>11.10.2. El CCB (Change Control Board)</li> <li>11.10.3. Tools and Techniques</li> </ul>	<ul> <li>11.11. Delivery and closure of technology projects</li> <li>11.11.1. Objectives and benefits of project closure</li> <li>11.11.2. Tools and Techniques</li> </ul>				

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Module 12. Scope management of technol	Scope management of technology projects					
<b>12.1.</b> Introduction to Risk Management 12.1.1. Project Scope 12.1.2. Product Scope	12.2. Fundamentals of Scope  Management  12.2.1. Basic Concepts. 12.2.2. Scope Baseline	12.3. Benefits of Scope Management 12.3.1. Stakeholder expectation management 12.3.2. Scope Creep & Gold Plating	12.4. Considerations for Adaptive Environments  12.4.1. Types of Adaptive Projects 12.4.2. Scope Definition in Adaptive Projects			
12.5. Scope Management Planning 12.5.1. Scope Management Plan 12.5.2. Requirements Management Plan 12.5.3. Tools and Techniques	<ul> <li>12.6. Gather Requirements</li> <li>12.6.1. Requirements Gathering and Negotiation</li> <li>12.6.2. Tools and Techniques</li> <li>12.7. Definition of Scope</li> <li>12.7.1. Project Scope Statement</li> <li>12.7.2. Tools and Techniques</li> </ul>	12.8. Creation of the Work Breakdown Structure (WBS) 12.8.1. Work Breakdown Structure (WBS) 12.8.2. Types of EDT 12.8.3. Rolling Wave 12.8.4. Tools and Techniques	12.9. Scope Validation 12.9.1. Quality vs Validation 12.9.2. Tools and Techniques			
12.10. Scope Control 12.10.1. Project Management Data and Information 12.10.2. Types of Work Performance Reports 12.10.3. Tools and Techniques						

#### Module 13. Time Management of Technology Projects

#### 13.1. Estimated Duration of Project Tasks

- 13.1.1. Estimation by 3 Values 13.1.1.1. Most Likely (tM)
  - 13.1.1.2. Optimistic (tO) 13.1.1.3. Pessimistic (tP)
- 13.1.2. Analogous Estimate
- 13.1.3. Parametric Estimation
- 13.1.4. Bottom-up Estimates
- 13.1.5. Decision Making
- 13.1.6. Expert Judgment

# 13.2. Definition of Activities and Breakdown of the Project's Work

- 13.2.1. Decomposition
- 13.2.2. Define Activities
- 13.2.3. Breakdown of Project Work
- 13.2.4. Activity Attributes
- 13.2.5. List of Milestones

#### 13.3. Sequencing of activities

- 13.3.1. List of Activities
- 13.3.2. Attributes of the Activities
- 13.3.3. Method of Precedence Diagramming
- 13.3.4. Determination and Integration of Units
- 13.3.5. Advances and Delays
- 13.3.6. Network Diagram of the Project Schedule

#### 13.4. Estimation of Activity Resources

- 13.4.1. Register of Assumptions
- 13.4.2. List of activities
- 13.4.3. Attributes of the Activities
- 13.4.4. Register of Assumptions
- 13.4.5. Lessons Learned Register
- 13.4.6. Project Team Assignments
- 13.4.7. Resource Breakdown Structure

#### 13.5. Estimated Duration of Activities

- 13.5.1. Law of Diminishing Returns
- 13.5.2. Number of Resources
- 13.5.3. Technological Advances
- 13.5.4. Staff Motivation
- 13.5.5. Project Documentation

#### 13.6. Schedule Development

- 13.6.1. Schedule Network Analysis
- 13.6.2. Critical Path Method
- 13.6.3. Resource Management 13.6.3.1. Resource Leveling 13.6.3.2. Stabilization of Resources
- 13.6.4. Advances and Delays
- 13.6.5. Schedule Compression
  13.6.5.1. Intensification
  - 13.6.5.2. Fast Execution
- 13.6.6. Baseline Schedule
- 13.6.7. Project Timeline
- 13.6.8. Schedule Data
- 13.6.9. Project Schedules

# 13.7. Types of Relationships and Types of Dependencies between all Project Activities

- 13.7.1. Mandatory Dependencies
- 13.7.2. Discretionary Units
  - 13.7.2.1. Preferred Logic
  - 13.7.2.2. Preferential Logic
  - 13.7.2.3. Soft Logic
- 13.7.3. External Units
- 13.7.4. Internal Units

# 13.8. Time Management Software in Technology Projects

- 13.8.1. Analysis of Different Software
- 13.8.2. Types of Software
- 13.8.3. Functionalities and Coverage
- 13.8.4. Utilities and Advantages

#### 13.9. Schedule Control

- 13.9.1. Job Performance Information
- 13.9.2. Schedule Forecasts
- 13.9.3. Change Requests
- 13.9.4. Update to the Time Management Plan
- 13.9.5. Project Document Updates

#### 13.10. Time Recalculation

- 13.10.1. Critical Path
- 13.10.2. Calculation of Minimum and Maximum
  - Times
- 13.10.3. Project Clearances
  - 13.10.3.1. What Is It?
  - 13.10.3.2. How to use it?
- 13.10.4. Total Slack
- 13.10.5. Free Clearance

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#### Module 14. Cost management of technology projects

### 14.1. What is the Cost Management Plan?

14.1.1. Planning Tools and Techniques 14.1.2. Cost Planning Results

## 14.2. Estimate Costs. Types of Estimates. Reserve Analysis

14.2.1. Useful Information for Cost Estimation 14.2.2. Tools and Techniques for Cost Estimation 14.2.3. Results of Cost Budget Preparation

### **14.3. Types of Project Costs** 14.3.1. Direct and Indirect Costs

14.3.2. Fixed and Variable Costs

#### 14.4. Project Evaluation and Selection

14.4.1. Financial Dimensions of a Project

14.4.2. VAN

14.4.3. TIR & RRN

14.4.4. Payback period

#### 14.5. Setting the Budget

14.5.1. Useful Information for the Preparation of the Project Budget

14.5.2. Tools and Techniques for Cost Budget Preparation

14.5.3. Results of Project Budget Preparation

#### 14.6. Cost Projections

14.6.1. Cost Management Data and Information 14.6.2. Types of Cost Performance Reports

#### 14.7. Earned Value Technique (EVM)

14.7.1. Base Variables and Status Variables

14.7.2. Forecasts

14.7.3. Emerging Techniques and Practices

#### 14.8. Project Cash Flow

14.8.1. Types of cash flows

14.8.2. Estimation of Net Cash Flows Associated with a Project

14.8.3. Discounted Cash Flows

14.8.4. Application of Risk to Cash Flows

#### 14.9. Cost Control

14.9.1. Objectives and Benefits of Cost Control 14.9.2. Tools and Techniques

#### Module 15. Quality management of technological projects

## 15.1. Importance of Quality Management in Projects

- 15.1.1. Key Concepts
- 15.1.2. Difference between Quality and Grade
- 15.1.3. Precision
- 15.1.4. Accuracy
- 15.1.5. Metrics

#### 15.2. Quality Theorists

- 15.2.1. Edwards Deming
  - 15.2.1.1. Shewart-Deming Cycle (*Plan Do -Check-*Act)
- 15.2.2. Continuing Improvement
- 15.2.3. Joseph Juran. Pareto Principle 15.2.3.1. Fitness-for-purpose Theory
- 15.2.4. Total Quality Management Theory
- 15.2.5. Kaoru Ishikawa (Herringbone)
- 15.2.6. Philip Crosby (Cost of Low Quality)

### 15.3. Regulations: ISO Business School 21500

- 15.3.1. Introduction
- 15.3.2. Background and History
- 15.3.3. Objectives and characteristics
- 15.3.4. Process group-Subject group
- 15.3.5. ISO 21500 vs. PMBOK
- 15.3.6. Future of the Standard

## 15.4. Emerging Trends and Practices in Quality Management

- 15.4.1. Policy Compliance and Auditing
- 15.4.2. Standards and Compliance
- 15.4.3. Continuing Improvement
- 15.4.4. Stakeholder Engagement
- 15.4.5. Recurring Retrospectives
- 15.4.6. Subsequent Retrospectives

### 15.5. Quality Management Planning

- 15.5.1. Cost-benefit Analysis
- 15.5.2. Multi-criteria Decision Analysis
- 15.5.3. Test Planning and Inspection
- 15.5.4. Flow Diagrams
- 15.5.5. Logical Data Model
- 15.5.6. Matrix Diagram
- 15.5.7. Interrelationship Digraphs

## 15.6. Quality Compliance and Noncompliance Costs

- 15.6.1. Compliance Costs
- 15.6.2. Non-compliance or Non-conformance Costs
- 15.6.3. Prevention Costs
- 15.6.4. Valuation Costs
- 15.6.5. Internal Failures
- 15.6.6. External Failures
- 15.6.7. Marginal Cost of Quality
- 15.6.8. Optimum Quality

#### 15.7. Quality Management

- 15.7.1. Checklists
- 15.7.2. Analysis of Alternatives
- 15.7.3. Document Analysis
- 15.7.4. Process Analysis
- 15.7.5. Root Cause Analysis
- 15.7.6. Cause-and-effect Diagrams
- 15.7.7. Histograms
- 15.7.8. Scatter Plots
- 15.7.9. Design for X
- 15.7.10. Quality Improvement Methods

#### 15.8. Quality Audits

- 15.8.1. What is an Internal Quality Audit?
- 15.8.2. Different Types of Audits
- 15.8.3. Objectives of an Internal Audit
- 15.8.4. Benefits of Internal Audits
- 15.8.5. Actors Involved in Internal Auditing
- 15.8.6. Internal Audit Procedure

### 15.9. Quality Control

- 15.9.1. Verification Sheets
- 15.9.2. Statistical Sampling
- 15.9.3. Questionnaires and Surveys
- 15.9.4. Performance Reviews
- 15.9.5. Inspection
- 15.9.6. Product Testing/Evaluation
- 15.9.7. Retrospectives and Lessons Learned

#### Module 16. Management of technology project resources

## 16.1. Responsibilities and Role of Human Resources in Projects

16.1.1. Project Manager

16.1.2. Sponsor

16.1.3. Functional Director

16.1.4. Program Manager

16.1.5. Portfolio Manager

16.1.6. Team members

## 16.2. Management of Technological Resources

16.2.1. What are Technological Resources?

16.2.2. Optimization

16.2.3. Valorization

16.2.4. Protection

### 16.3. Human Resources Management Planning and Estimation of Resources for Activities

16.3.1. Resources Management Plan 16.3.1.1. Data Representation 16.3.1.2. Organizational Theory

16.3.2. Resource Requirements

16.3.3. Basis of Estimates

16.3.4. Resource Breakdown Structure

16.3.5. Resource Document Updates

## 16.4. Different Powers of the Project Manager

16.4.1. Power and Influence

16.4.2. Reward Power

16.4.3. Power of Punishment

16.4.4. Expert Power

16.4.5. Power of Reference

16.4.6. Formal Power of Attorney

16.4.7. Practical Exercises on How to use the Various Powers of the Project Manager

## 16.5. Acquisition of the Right Project Equipment for our Project

16.5.1. What is Equipment Acquisition?

16.5.2. Means of Equipment Acquisition

16.5.2.1. Hiring

16.5.2.2. Outsourcing

16.5.3. Decision Making

16.5.3.1. Availability

16.5.3.2. Costs

16.5.3.3. Experience

16.5.3.4. Skills

16.5.3.5. Knowledge

16.5.3.6. Capabilities

16.5.3.7. Attitude

16.5.3.8. International Factors

16.5.4. Pre-assignment

16.5.5. Virtual Teams

### 16.6. Development of Interpersonal Skills (soft skills)

16.6.1. Leadership.

16.6.2. Motivation

16.6.3. Communication.

16.6.4. Influence

16.6.5. Group Facilitation

16.6.6. Creativity

16.6.7. Emotional Intelligence

16.6.8. Decision Making

#### 16.7. Project Team Development

16.7.1. Recognition and Rewards

16.7.1.1. Preconditions to be Met for its Application

16.7.1.2. Create a Recognition and Reward

System

16.7.2. Training

16.7.3. Coubication (tight matrix)

16.7.4. Communication technology

16.7.5. Team Building Activities

### 16.8. Project team management. Performance Evaluations, Management of Project Teams

16.8.1. Plan

16.8.2. Types of Assessments 16.8.2.1. Personal Evaluations 360° Evaluations

16.8.2.2. Equipment Evaluations

16.8.3. Variables Definition

16.8.4. Design of the Performance Evaluation System

16.8.5. Implementation and Training of Evaluators

### 16.9. Conflict Management and Conflict Resolution

16.9.1. What are Project Conflicts? Types

16.9.2. Cooperate and Solve Problems (collaborative/problem solve)

16.9.3. To Compromise / to Consent (Compromise / Council)

16.9.4. withdraw/avoid

16.9.5. smooth/accommodate

16.9.6. Force/Direct

16.9.7. Practical Exercises to Know When to use Each Conflict Resolution Technique.

# 16.10. Emerging Trends and Practices in the Management of Technology Project Resources.

16.10.1. Methods for Resource Management

16.10.2. Emotional Intelligence (EI)

16.10.3. Self-organized Teams

16.10.4. Virtual teams/distributed teams

16.10.5. Considerations for Adaptation

16.10.6. Considerations for Agile/Adaptive Environments

#### Module 17. Communications and Stakeholder Management for Technology Projects

### 17.1. Communications Management Planning

- 17.1.1. Why is a Communications Management Plan important?
- 17.1.2. Introduction to Communications
  Management
- 17.1.3. Communications Analysis and Requirements
- 17.1.4. Dimensions of Communications
- 17.1.5. Techniques and Tools

#### 17.2. Communication Skills

- 17.2.1. Conscious Emission
- 17.2.2. Active Listening
- 17.2.3. Empathy
- 17.2.4. Avoid Bad Gestures
- 17.2.5. Reading and Writing
- 17.2.6. Respect
- 17.2.7. Persuasion
- 17.2.8. Credibility

# 17.3. Effective, Efficient Communication and Types of Communication

- 17.3.1. Definition
- 17.3.2. Effective Communication
- 17.3.3. Efficient Communication
- 17.3.4. Formal Communication
- 17.3.5. Informal Communication
- 17.3.6. Written Communication.
- 17.3.7. Verbal Communication
- 17.3.8. Practical Exercises on the use of Communication Types in a Project

### 17.4. Communications Management and Control

- 17.4.1. Project Communications Management
- 17.4.2. Communication Models
- 17.4.3. Communication Methods
- 17.4.4. Project Communications Channels

### 17.5. Emerging Trends and Practices in the Field of Communication.

- 17.5.1. Evaluation of Communication Styles
- 17.5.2. Political Awareness
- 17.5.3. Cultural Awareness
- 17.5.4. Communication Technology

## 17.6. Stakeholder Identification and Analysis

- 17.6.1. Why is it Important to Manage Stakeholders?
- 17.6.2. Stakeholder Analysis and Registration
- 17.6.3. Stakeholder Interests and Concerns
- 17.6.4. Considerations for Agile and Adaptive

Environments

### 17.7. Stakeholder Management Planning

- 17.7.1. Appropriate Management Strategies
- 17.7.2. Tools and techniques

### 17.8. Stakeholder participation Management. Management strategy

- 17.8.1. Methods for Increasing Support and Minimizing Resistance
- 17.8.2. Tools and techniques

# 17.9. Stakeholder Involvement Monitoring

- 17.9.1. Stakeholder Performance Report
- 17.9.2. Tools and techniques

### tech 44 | Structure and Content

Module 18. Technology project procurement management					
<ul> <li>18.1. Introduction to Acquisition Management</li> <li>18.1.1. Definition of Contract</li> <li>18.1.2. Legal Framework acquisitions</li> </ul>	18.2. Basic Concepts  18.2.1. Definition of Contract 18.2.2. The Project Manager and the Contract 18.2.3. Main Activities 18.2.4. Centralized and Decentralized Contracting	<ul> <li>18.3. Procurement Management: Benefits</li> <li>18.3.1. Definition the Acquisition Strategy.</li> <li>18.3.2. Types of Strategies</li> </ul>	18.4. Acquisitions in Adaptive Environments		
18.5. Types of Contracts 18.5.1. Fixed Price Contracts 18.5.2. Reimbursable Cost Contracts 18.5.3. Time and Materials Contracts	18.6. Procurement Documentation  18.6.1. Types of Documents in the Context of an Acquisition  18.6.2. Document Flows in Procurement Management	<b>18.7. Negotiation with Suppliers</b> 18.7.1. Supplier Negotiation Objectives 18.7.2. Negotiation Techniques with Suppliers	18.8. Procurement Management Planning 18.8.1. Procurement Management Plan 18.8.2. Tools and techniques		
18.9. Procurement 18.9.1. Search, Selection and Evaluation of Bids 18.9.2. Tools and techniques 18.9.3. Bid Weighting Matrix	18.10. Procurement Monitoring and Control  18.10.1. Procurement Monitoring and Control Points by Contract Type 18.10.2. Tools and techniques				

### Module 19. PMP® or CAPM® Certification and Code of Ethics. Emerging Tendencies and Practices

#### 19.1. What is PMP®, CAPM® and PMI®?

19.1.1. What is PMP®? 19.1.2. CAPM®

19.1.3. PMI® 19.1.4. PMBOK

obtaining PMP® and CAPM® certification

19.2. Advantages and Benefits of

19.2.1. Techniques and Tricks to Pass the PMP® and CAPM® Certification Exams on the First Attempt.

19.2.2. PMI-isms

# 19.3. Professional Experience Report to the PMI® (Project Management and Design Institute).

19.3.1. Becoming a PMI® Member

19.3.2. PMP® and CAPM® Certification Exam Entry Requirements

19.3.3. Analysis of the Student's Professional Experience

19.3.4. Student Work Experience Report Help Template

19.3.5. PMI® Software Experience Report

### 19.4. PMP® Certification Exam or CAPM® Exam

19.4.1. What is the PMP® or CAPM® Certification Exam Like?

19.4.2. Number of Scoring and Non-scoring Questions

19.4.3. Duration of the Exam

19.4.4. Passing Threshold

19.4.5. Number of Questions per Process Group

19.4.6. Qualification Methodology

#### 19.5. Agile Methodologies

19.5.1. AGILE

19.5.2. Scrum

19.5.3. Kanban

19.5.4. LEAN

19.5.5. Comparison with PMI® Certifications

## 19.6. Software Development in Agile Methodologies

19.6.1. Analysis of the Different Software on the Market

19.6.2. Advantages and Benefits

# 19.7. Advantages and Limitations of Implementing Agile Methodologies in your technology projects

19.7.1. Advantages

19.7.2. Limitations

19.7.3. Agile Methodologies vs. Traditional Tools

# 19.8. Code of Ethics in the Management of your Projects

19.8.1. Responsibility

19.8.2. Respect

19.8.3. Impartiality

19.8.4. Honesty



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.





### tech 48 | Methodology

# TECH Business School uses the 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.





This program prepares you to face business challenges in uncertain environments and achieve business success.



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

### A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. 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 business reality is taken into account.



You will learn, through collaborative activities and real cases, how to solve complex situations in real business environments"

The case method has been the most widely used learning system among the world's leading business 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 we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They must integrate all their knowledge, research, argue and defend their ideas and decisions.

### tech 50 | Methodology

### Relearning Methodology

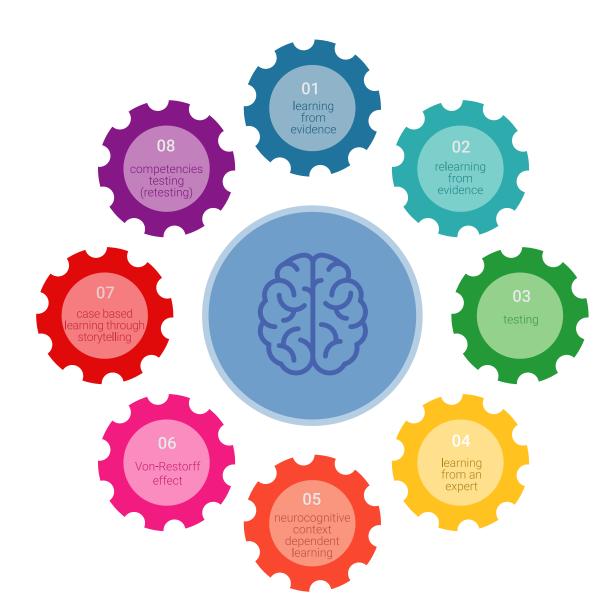
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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

Our online system will allow you to organize your time and learning pace, adapting it to your schedule. You will be able to access the contents from any device with an internet connection.

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 online business school is the only one in the world licensed to incorporate 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 | 51 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. With this methodology we have 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, markets, and financial 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 specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to 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.

### tech 52 | Methodology

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.



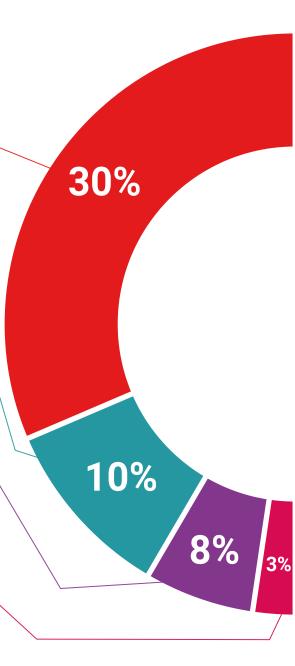
### **Management Skills Exercises**

They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager needs to develop in the context of the globalization we live in.



#### **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.





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 senior management 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.

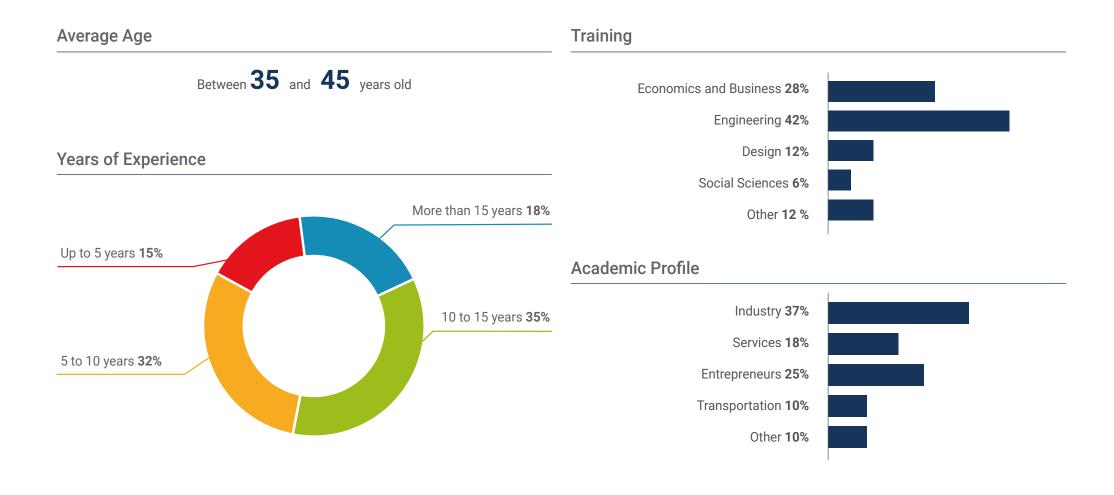




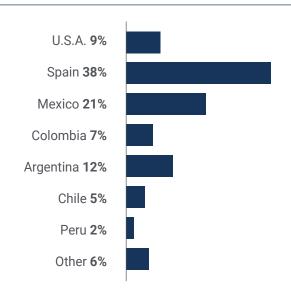
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### **Geographical Distribution**





# Mr. Manuel Pérez

Managing director of a multinational company

"When I decided to take this Advanced Master's Degree I had many doubts because, although I knew it was essential for my career, I doubted that I would be able to successfully complete it, having to combine it with other daily obligations. However, I took the plunge and today I believe it has been one of the most enriching experiences at the academic level. The digital content greatly enhances their study and the high quality of the faculty makes the experience even more enriching"





#### **International Guest Director**

With a long career focused on higher education, J. Michael DeAngelis has worked as a broadcaster, scriptwriter and actor. After holding various academic positions at the University of Pennsylvania, he has been appointed Associate Director of Communications and Technology at the University of Pennsylvania. There, he is in charge of producing and presenting the weekly news podcast CS Radio. He is also co-creator of the comedy podcast Mission: Rejected, in which he directs, writes and produces.

Throughout his career, he has worked for local educational television networks and radio stations in the news sections. On the other hand, after graduating from Muhlenberg College with a degree in Performing Arts, he has held the position of director of The Porch Room, a production company for podcast, film and theater. With all this, he has had the opportunity to perform different functions in the field of Communication and Entertainment. Likewise, he has performed tasks both in front of and behind the microphones in the news and entertainment field.

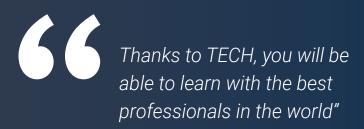
In particular, with the irruption of **podcasts** and their continuous growth, this expert has specialized in creating and producing this type of sound content. Through them, and thanks to his experience as an actor, he manages to transmit to listeners not only information and stories, but also emotions through his voice.

On the other hand, DeAngelis has been recognized on several occasions for his theatrical work, his play Drop was honored at the Samuel French Off-Off Broadway Short Play Festival in 2009. That same year, he won the New Jersey Association of Community Theatres (NJACT) Perry Award for Best Production of an Original Play for Accidents Happen. At the same time, his distinguished career has earned him membership in the Dramatist Guild of America.



### Mr. DeAngelis, J. Michael

- Director of Communications and Technology at the University of Pennsylvania, United States
- Director of the production company The Porch Room
- Host of the weekly news podcast CS Radio
- Broadcaster and Podcaster
- NJACT Perry Award
- B.A. in Performing Arts from Muhlenberg College
- Graduate in Acting and Theatre Criticism from Goldsmiths College, University of London
- Member of: Playwrights Guild of America



### Management



### Mr. Pampliega, Carlos

- Architect specialized in Project and Risk Management
- Certified Project Management Professional (PMP)
- Professional Scrum Master certified by Scrum.org
- Active member of PMI-Madrid Spain Chapter Since 2013
- Director of PMI Castilla y León Branch, the delegation in Castilla y León 2013
- He regularly participates as a speaker in presentations and courses, as well as in congresses organized by PMI
- Consultant and Trainer in Project Management at different universities and business schools
- Member of the Editorial Board of the scientific journal Building & Management
- Member of the PMO Global Alliance Awards Judges Committee

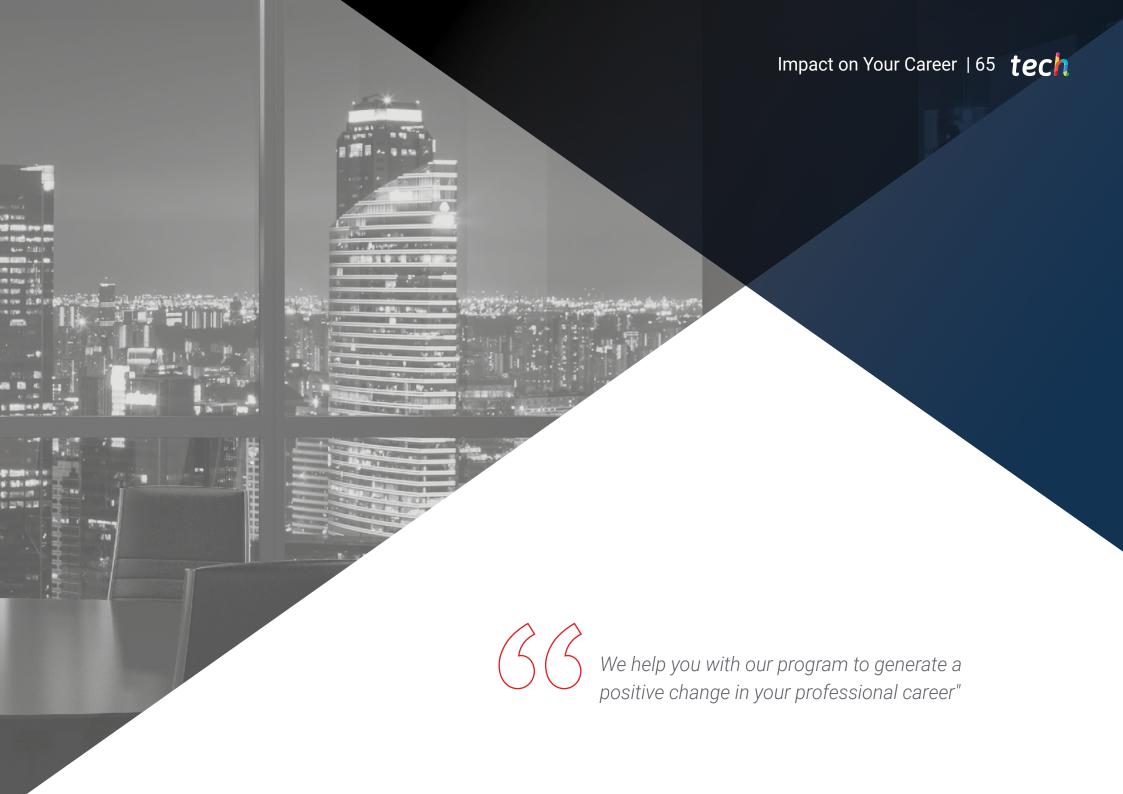


### Dr. Roji Ferrari, Salvador

- Vice-Dean of International Relations, Faculty of Economics and Business Studies, Complutense University of Madrid
- D. in Accounting and Finance. Complutense University of Madrid. 1997
- Degree in Journalism, Complutense University of Madrid, 1971-1977
- Master's Degree in Sciences of Finance. University of Maryland & Baltimore 1990
- Master's Degree in Business Administration (MBA). University of Maryland & Baltimore, 1989
- Professor of the Faculty of Economics and Business Administration, Department of Financial Administration and Accounting. Since 1994
- He has published 6 books on finance and business economics, as well as a multitude of articles and chapters on both divulgation and research







Don't miss the opportunity to study the most complete technology project management program on the market.

# Are you ready to take the leap? Excellent professional development awaits you

This Professional Master's Degree in Technology Project Management within the Company from TECH Technological University is an intensive program that prepares the professional to face challenges and business decisions both nationally and internationally. Its main objective is to promote your personal and professional growth, and thus help you achieve success.

If you want to improve yourself, make a positive change at a professional level and interact with the best, this is the place for you.

If you are looking for an improvement at work, at TECH we put all our resources at your disposal to help you achieve it.

### When the change occurs

During the program

21%

During the first year

43%

After 2 years

36%

### Type of change



### Salary increase

This program represents a salary increase of more than **25%** for our students.

\$57,900

A salary increase of

25.22%

\$72,500





### tech 70 | Benefits for Your Company

Developing and retaining talent in companies is the best long-term investment.



# Intellectual Capital and Talent Growth

The professional will introduce the company to new concepts, strategies, and perspectives that can bring about significant changes in the organization.



# Retaining high-potential executives to avoid talent drain

This program strengthens the link between the company and the executive and opens new avenues for professional growth within the company.



### **Building agents of change**

The professional will be able to make decisions in times of uncertainty and crisis, helping the organization overcome obstacles.



### Increased international expansion possibilities

Thanks to this program, the company will come into contact with the main markets in the world economy.





### **Project Development**

The professional will work on a current project or develop new projects in the field of R&D or Business Development within their company.



### Increased competitiveness

This program will equip students with the skills to take on new challenges and drive the organization forward.







### tech 74 | Certificate

This Advanced Master's Degree in Management of Technological Projects in the Company contains the most complete and updated program on the market.

After you have passed the evaluations, you will receive your corresponding **Advanced Master's Degree** issued by **TECH Technological University** via tracked delivery\*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Advanced Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional from career evaluation committees.

Title: Advanced Master's Degree in Technology Project Management within the Company

Official N° of hours: 3,000 h.





<sup>\*</sup>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.



# Advanced Master's Degree

Technology Project Management within the Company

Course Modality: Online

Duration: 2 years

 ${\sf Accreditation} \ {\sf TECH} \ {\sf Technological}$ 

University

Official N° of hours: 3,000 h.

