

# Advanced Master's Degree Technology Project Management within the Company

A M D T P M C



## Advanced Master's Degree Technology Project Management within the Company

Course Modality: Online

Duration: 2 years

Accreditation TECH Technological University

Official N° of hours: 3,000 h.

Acceso web: [www.techtute.com/escuela-de-negocios/grand-master/grand-master-gestion-proyectos-tecnologicos-empresa](http://www.techtute.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.



Professional Master's Degree in Management of Technological Projects in the Company.  
TECH Technological University



“

*Specialize in technology project management and achieve professional success for you and your company"*

02

# Why Study at TECH?

TECH is the world's largest 100% online business school. It is an elite business school, with a model based on the highest academic standards. A world-class centre for intensive managerial skills training.



“

*TECH is a university at the forefront of technology, and puts all its resources at the student's disposal to help them achieve entrepreneurial success"*

## 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+**

executives trained each year

**200+**

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:



### Learn with the best

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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"*



### 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

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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 groundbreaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.

03

# Why Our Program?

Studying this TECH program means increasing the chances of achieving professional success in senior business management.

It is a challenge that demands effort and dedication, but it opens the door to a promising future. Students will learn from the best teaching staff and with the most flexible and innovative educational methodology.



“

*We have highly qualified teachers and the most complete syllabus on the market, which allows us to offer you training of the highest academic level"*

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

**01**

### 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.*

**02**

### 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.*

**03**

### 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.*

**04**

### 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.*

05

### 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.*

06

### 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.*

07

### 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.*

08

### 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.*

# 04 Objectives

This program is designed to strengthen the student's management and leadership skills, as well as to develop new competencies and skills that will be essential in their professional development. After the program, you will be equipped to make global decisions with an innovative perspective and an international vision.



“

*One of our fundamental objectives is to help you develop the essential skills to strategically lead technology projects”*

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:

01

Increase the employability of the professional studying this program

04

Improve knowledge of areas complementary to project management; Business strategy and financial management and financial management

02

Improve the salary level that professionals have at the time of obtaining this degree

05

Improving the management of people and high-performance teams

03

Moving from the technical management side to the managerial side within organizations

06

Understanding how to manage companies, work and people in environments of high uncertainty



07

Have a horizontal and vertical vision of the organizations

10

Know how to work more effectively, more agile and more aligned with new technologies and current tools

08

Improve execution capacity

11

Learn what the key legal aspects are when writing a project contract

09

Improve creativity

12

Know the best methods to get your team not only involved but also committed to them

13

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

16

Develop the ability to predict in environments of high uncertainty

14

Learn to generate ideas that add value to organizations

15

Identify non-value-added tasks to be eliminated

17

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



18

Develop the ability to manage several projects at the same time

20

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



21

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

19

Know how to distribute workloads of shared resources among several projects

22

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

23

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

25

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

24

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

26

Develop the minutes of incorporation of technology projects



27

Carry out a comprehensive control of all projects

29

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



28

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

30

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

33

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.

# 05 Skills

After passing the evaluations of the Professional Master's Degree in Technological Project Management within the Company, the professional will have acquired the necessary competences for a quality and up-to-date praxis based on the most innovative didactic methodology.







“

*Develop yourself in a booming industry by acquiring the skills and abilities you need to succeed in the workplace”*

01

Achieve a financial understanding of the company

02

Understand the relationship between business strategy, portfolios, programs and projects

03

Learn to manage companies in environments of high uncertainty

04

Manage of your own personal time and the time of others

05

Understand the relationship between scope, time and cost

06

Learn to communicate in changing environments and crisis environments

07

Understand how to manage a high-performance team.

10

Understand the main financial indicators of organizations

08

Learn to perform tasks in an agile way, minimizing time and eliminating tasks that do not add value

11

Design and implement PMO structures within an organization

09

Know how to analyze the income statement of companies

12

understand the keys to successful R+D+I management in organizations

13

Calculate the viability of a project before its execution

16

Audit the quality of each of the processes involved in the project design

14

Identify the direct and indirect costs associated with any business activity

17

Apply the specific regulations and best practice criteria for the management of technology projects

15

Successfully manage projects and technologies to achieve business objectives

18

Perform the process of work monitoring and quality control of technological projects

19

Manage the scope of technology projects

22

Understand emerging trends and practices in technology project resource management and implement them

20

Estimating the duration of projects and managing them appropriately

23

Apply new trends in the field of communication

21

Understanding the human and material resources required to carry out a project

24

Apply the code of ethics in the management of technological projects

06

# Structure and Content

This Professional Master's Degree in Technology Project Management within the Company is a program designed to suit the professional, which is taught in a 100% online format so that you can choose the time and place that best suits your availability, schedule and interests.

A program that takes place over 24 months and is intended to be a unique and stimulating experience that lays the foundation for your success as a manager and entrepreneur.



“

*The skills and competencies that you acquire when you undertake a program of this type are fundamental. Therefore, we give you all the facilities so that you do not miss the opportunity to study at TECH"*

## 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



<b>Module 11</b>	Introduction to technology project design and management and technology project integration management
<b>Module 12</b>	Scope management of technology projects
<b>Module 13</b>	Time management of technology projects
<b>Module 14</b>	Cost management of technology projects
<b>Module 15</b>	Quality management of technological projects
<b>Module 16</b>	Management of technology project resources
<b>Module 17</b>	Communications and stakeholder management for technology projects
<b>Module 18</b>	Technology project procurement management
<b>Module 19</b>	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.*

**Module 1. Strategic Project Management**

1.1. Strategic Project Management and the Company	1.2. Competitive Business Strategy Management	1.3. Corporate Business Strategy	1.4. Project Management Framework
1.6. Areas of Knowledge in Project Management	1.7. Project Change Management:	1.8. Stakeholder Management	1.5. Integration and Knowledge
1.10. Traditional and Innovative Methodologies			1.9. Project Communication Management

**Module 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			

**Module 3. Project Financial Management**

3.1. Financial Plan	3.2. Financial Model	3.3. Project Viability Analysis	3.4. Project Sensitivity Management
3.6. Project Cost Estimation	3.8. Economic Analysis of Decisions	3.10. Digital Tools and Systems for Project Management	3.5. Project Cost Management
3.7. Project Cost Control - EVM	3.9. Ms Project Tools		

**Module 4. Recruitment and Project Quality**

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

**Module 5. People and Resource Management**

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 Resources		

**Module 6. Innovative Organizations and Projects**

6.1. Organizational Change Management	6.2. Communication in Organizations	6.4. Process Engineering and Product Engineering	6.5. Strategic Innovation Intelligence
	6.3. Creative Thinking: Innovation		6.6. Entrepreneurship and Innovation
6.7. Launch and Industrialization of New Products	6.8. R+D+I Management Systems	6.9. Direction and Management of R+D+I Projects	6.10. Project Management for Startups

### Module 7. 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		

### Module 8. PMO

8.1. Introduction to the Project Management Office	8.2. Functions of the Project Management Office	8.3. Creating the Conditions for Change Leading Organizational Change	8.5. PMO Model Design
		8.4. PMO Vision and Strategy	8.6. PMO Resource Plan
8.7. PMO Implementation	8.9. <i>Project Management</i> Culture and Knowledge Management in the Organization	8.10. Agile PMO	
8.8. PMO Operation and Tools			

### Module 9. Project Risk Management

9.1. Introduction to Risk Management	9.3. Risk Identification	9.5. Risk Prioritization	9.7. Scenario Analysis and Risk Response Plans
9.2. Project Risk Management Planning	9.4. Qualitative Risk Analysis	9.6. Quantitative Risk Analysis	
9.8. Implementation of Risk Response	9.10. Lessons Learned and Knowledge Management		
9.9. Risk Monitoring and Control			

**Module 10. Introduction to Project Finance**

10.1. Introduction to corporate finance	10.2. Financial statements and cash flows	10.3. The Value of Money and Discounted Cash Flows	10.4. Fixed income and its valuation 10.5. Equities and their valuation
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 Finance

**Module 11. Introduction to technology project design and management and technology project integration management**

<b>11.1. Introduction to technology project management</b> 11.1.1. The role of the project manager 11.1.2. Project definition 11.1.3. Organizational structure	<b>11.2. Project management, program management and portfolio management</b> 11.2.1. Portfolios, programs and projects 11.2.2. Strategic Management	<b>11.3. Standards and best practices for the management of technology projects</b> 11.3.1. Prince2. 11.3.2. PMP 11.3.3. ISO 21500:2012	<b>11.4. Organizational influences on the design and management of technology projects.</b> 11.4.1. Environmental factors of a company 11.4.2. Assets of an organization's processes
<b>11.5. Technology project management processes</b> 11.5.1. Life cycle of technology projects 11.5.2. Process groups 11.5.3. Dynamics of process groups	<b>11.6. Development of the technology project constitution act</b> 11.6.1. Definition of the charter of incorporation of technology projects 11.6.2. Tools and techniques	<b>11.7. Development of the plan for the design and management of technological projects.</b> 11.7.1. Definition of the plan for the design and management of technological projects. 11.7.2. Tools and techniques	<b>11.8. Knowledge management of technological projects</b> 11.8.1. Importance of knowledge management in technology projects 11.8.2. Tools and Techniques
<b>11.9. Monitoring the work of technology projects</b> 11.9.1. Work monitoring and control 11.9.2. Follow-up reports on technology projects 11.9.3. Tools and Techniques	<b>11.10. Integrated control of changes in technological projects</b> 11.10.1. Objectives and benefits of project change control 11.10.2. The CCB (Change Control Board) 11.10.3. Tools and Techniques	<b>11.11. Delivery and closure of technology projects</b> 11.11.1. Objectives and benefits of project closure 11.11.2. Tools and Techniques	

Module 12. Scope management of technology projects

12.1. 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

12.6. Gather Requirements

- 12.6.1. Requirements Gathering and Negotiation
- 12.6.2. Tools and Techniques

12.7. Definition of Scope

- 12.7.1. Project Scope Statement
- 12.7.2. Tools and Techniques

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

**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

**Module 18.** Technology project procurement management

**18.1. Introduction to Acquisition Management**

- 18.1.1. Definition of Contract
- 18.1.2. Legal Framework acquisitions

**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

**18.3. Procurement Management: Benefits**

- 18.3.1. Definition the Acquisition Strategy.
- 18.3.2. Types of Strategies

**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

**18.7. Negotiation with Suppliers**

- 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

**19.2. Advantages and Benefits of obtaining PMP® and CAPM® certification**

- 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

07

# 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"*

## 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.

“

*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”*



*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.

## 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.



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.



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.



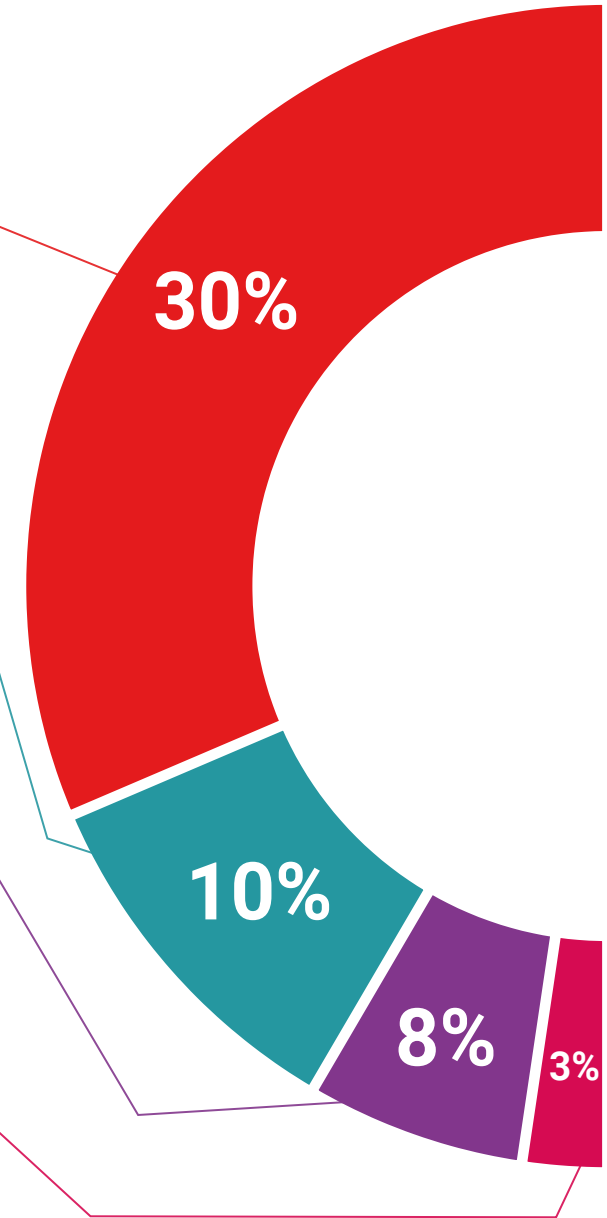
### Management Skills Exercises

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.





### 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 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.



08

# Our Students' Profiles

This Professional Master's Degree in Technology Project Management within the Company is a program aimed at experienced professionals who want to update their knowledge and advance in their professional career. This program uses a multidisciplinary approach as the students have a diverse set of academic profiles and represent multiple nationalities.





“

*If you have experience in project management and are looking for an interesting career enhancement while continuing to work, this is the program for you”*

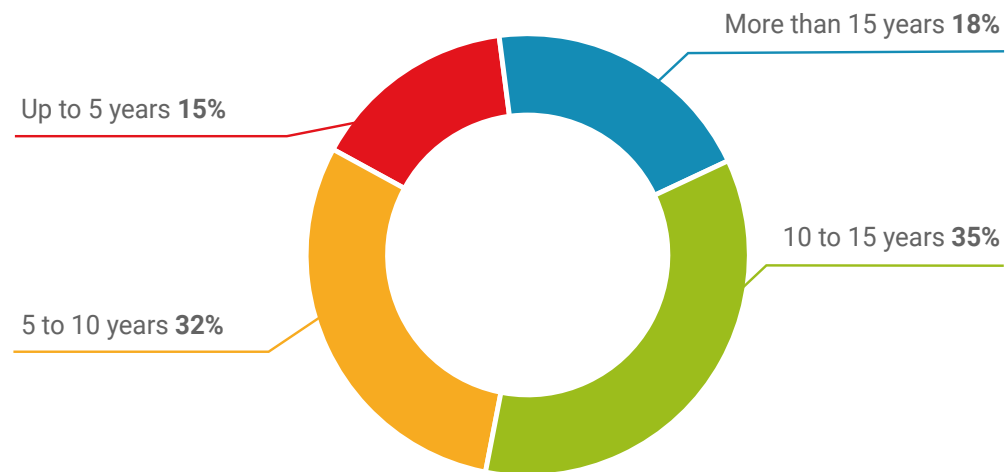
### Average Age

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Between **35** and **45** years old

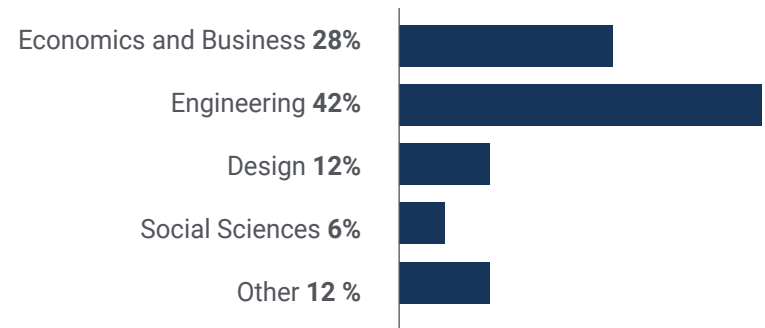
### Years of Experience

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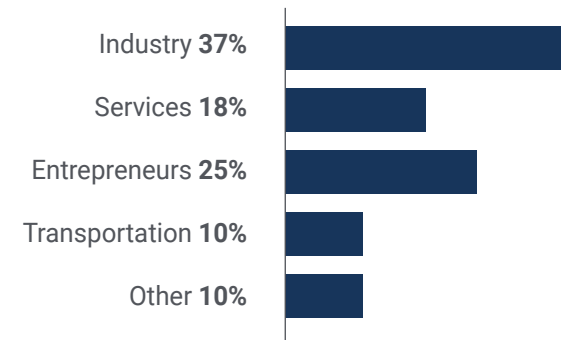
### Training

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### Academic Profile

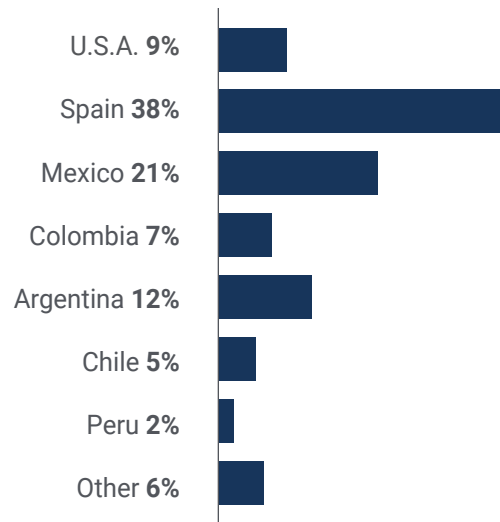
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## Geographical Distribution

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## 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"*

09

# Course Management

The program includes in its teaching staff leading experts in the management and direction of technological projects, who bring to this program the experience of their years of work. Furthermore, other renowned specialists in related disciplines participated in designing and preparing the course, making it a unique and highly nourishing academic experience for the student.





“

*A complete teaching staff to train you for professional success”*

## 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



10

# Impact on Your Career

We are aware that studying a program like this entails great economic, professional and, of course, personal investment. The ultimate goal of this great effort should be to achieve professional growth.

And, therefore, we put all our efforts and tools at your disposal so that you acquire the necessary skills and abilities that will allow you to achieve this change.





“

*We help you with our program to generate a positive change in your professional career”*

### 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.

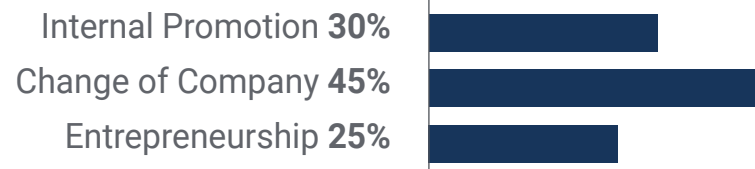
*If you are looking for an improvement at work, at TECH we put all our resources at your disposal to help you achieve it.*

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

### When the change occurs



### Type of change





### Salary increase

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



11

# Benefits for Your Company

This Professional Master's Degree in Technology Project Management contributes to elevate the organization's talent to its maximum potential through the specialization of high-level leaders. Therefore, participating in this academic program will improve not only on a personal level but, above all, on a professional level, increasing the professional's training and improving his or her management skills. But, in addition, joining the TECH educational community is a unique opportunity to access a powerful network of contacts in which to find future professional partners, customers or suppliers.





“

*After completing this Advanced Master's Degree you will bring a new business visión to the company"*

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

01

### **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.

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02

### **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.

03

### **Building agents of change**

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

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04

### **Increased international expansion possibilities**

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



05

### **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.

---

06

### **Increased competitiveness**

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

# 12 Certificate

This Advanced Master's Degree in Technological Project Management within the Company guarantees, in addition to the most rigorous and update training, access to a Advanced Master's Degree issued by TECH Technological University.





“

*Successfully complete this training and receive your university degree without travel or laborious paperwork”*

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.**



\*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**

Accreditation **TECH Technological University**

Official N° of hours: **3,000 h.**

# Advanced Master's Degree Technology Project Management within the Company