

# Professional Master's Degree

## Advanced Technology Project Management





## Professional Master's Degree Advanced Technology Project Management

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/information-technology/professional-master-degree/master-advanced-technology-project-management](http://www.techtitute.com/us/information-technology/professional-master-degree/master-advanced-technology-project-management)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Skills

---

*p. 14*

04

Course Management

---

*p. 18*

05

Structure and Content

---

*p. 22*

06

Methodology

---

*p. 32*

07

Certificate

---

*p. 40*

# 01

# Introduction

The technology sector is constantly evolving at a dizzying pace, so companies are obliged to incorporate highly skilled leaders into their workforces. These project and team managers must possess diverse qualities, among which the management and analysis of complex data, optimization of processes and resources, or the coordination of personnel in pursuit of the wellbeing of individual and team performance. This program aims to instruct students in this complex reality, providing them with all the most modern tools and methodologies to easily face the challenge of leading large-scale technological projects.



“

*Jeff Bezos went to space. Can you imagine where you could get to with the right skills? Enroll now in this Professional Master's Degree and start building your future as a technology leader”*

In a sector that requires highly qualified and specialized technicians, leaders must be even more competent and possess a wide range of skills with which to manage not only day-to-day work, but also potential problems or radical changes that projects may undergo due to the changing nature of technology.

Thus, the Professional Master's Degree in Advanced Technology Project Management focuses on methods such as Agile Project Management and how it can be applied in the field of Software Development and Business Management, using the available resources and the special importance of Data Analysis when making decisions that can greatly benefit the project. It is precisely analytics that has the greatest relevance, because throughout the training its present and future will be addressed, with its multiple applications in all areas of work.

Students will acquire a set of essential knowledge when managing multidisciplinary teams, making their curriculum more attractive to the leading companies in the field. By understanding everything involved in managing a technological project and its complexities, students will not only increase their knowledge but also their job prospects.

A Professional Master's Degree that also has the particularity of being 100% online, which facilitates student study time as it eliminates the obligation to attend a physical center and the fixed schedules that this entails. All the didactic material is accessible from any device with an Internet connection, which allows for the necessary flexibility to adapt study materials to the student's own rhythms and obligations.

This **Professional Master's Degree in Advanced Technology Project Management** contains the most complete and up-to-date educational program on the market. The most important features include:

- ◆ Intensive study of all areas of management, from resource management to human capital management
- ◆ Extensive content on the latest analytical methodology on the market, teaching students how to apply it in developing projects
- ◆ Large amount of audiovisual and practical material, which makes study work lighter for students
- ◆ Updated information on how teams in the technology sector are managed today
- ◆ Special attention to the legal framework governing technology projects involving personal data
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Technological companies entrust their best projects only to the most capable leaders. Access the most ambitious projects by specializing in Advanced Technology Project Management”*

“

*Nothing will catch you by surprise with the knowledge you will acquire in this Professional Master's Degree in Advanced Technology Project Management”*

The program's teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive training programmed to train in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Apple, Microsoft, Google... Big companies are waiting for professionals like you. Impress them with a complete resume that shows you're up to the task.*

*Anticipate the problems of the future through analytics and learn how to reshape a technology project to adapt it to changing market needs.*



# 02 Objectives

With an ever-growing technological market and with more demanding requirements from the public, companies in the sector have been forced to look for specialized leaders in a multitude of management areas. Faced with this reality, TECH has developed this program, which aims precisely to instruct students in the variety of knowledge necessary to assume an effective and superior management than other managers who are not specialized.







“

*Steve Jobs was a man ahead of his time, with great leadership ability even in the worst of times. Who says you can't be the next Steve Jobs? Enroll now and learn everything you need to know to be a great leader”*



## General Objectives

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- ◆ Specialize in the main *Frameworks* for the Direction and Management of IT Projects
- ◆ Handle the most appropriate techniques for the Management of People and Teams, with the objective of favoring their well-being and labor productivity
- ◆ Work with the different Analytical Techniques for Strategic Decision Making
- ◆ Use the main market tools for KPI Monitoring to control project execution and progress with respect to set strategy
- ◆ Develop the most common Enterprise Information Management Systems
- ◆ Analyze processes and requirements for the Development of Software Projects
- ◆ Determine the importance of Quality Management in Software Project Management and learn to apply the necessary criteria for its establishment and control
- ◆ Address the issues involved in Data Management in terms of data protection and security and learn how to apply and comply with current regulations





## Specific Objectives

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### Module 1. Agile Technology Project Direction and Management

- ◆ Develop expertise in Project Management and Agile Methodology for Project Management
- ◆ Analyze the context of Agile Methodologies for Project Management
- ◆ Establish the Scrum Framework for Agile Project Management
- ◆ Analyze the Kanban Framework for Agile Project Management

### Module 2. Requirements Management and Process Analysis in Software Development Projects

- ◆ Analyze the different "roles" and functions of a New Information Systems Analyst
- ◆ Examine the different Data Collection Methods
- ◆ Develop DFD examples and E-R examples for Databases
- ◆ Develop Practical Business Models

### Module 3. Business Management: Technologies for Resource and Customer Management

- ◆ Determine a Business Strategy
- ◆ Develop a Unified Reporting System for each company process
- ◆ Establish direct communication between company departments and customers
- ◆ Determine Easy Control and Management Systems, accessible in real time

### Module 4. IT Project Management and Control through Business Intelligence

- ◆ Develop or apply data in diverse contexts
- ◆ Solve problems in complex contexts and with incomplete information
- ◆ Determine business analytics application cases for recurrent problems, known or new, in companies
- ◆ Propose, communicate and elaborate business models or business transformation models justifying their benefits and opportunity for organizations

### Module 5. IT Project Strategic Monitoring and Control

- ◆ Determine data life cycle phases: Data, information, knowledge and value
- ◆ Examine the different analytical levels: Descriptive, prescriptive and predictive analytics
- ◆ Analyze the differences between different data warehousing paradigms: Data Lake, Data Warehouse and Data Mart
- ◆ Evaluate the advantages of a set of technology solutions used in business intelligence

### Module 6. Digital Analytics for Decision-Making in Technology Projects

- ◆ Determine the meaning of Digital Analytics by knowing its principles
- ◆ Correctly configure the Google Analytics Tool
- ◆ Evaluate results and optimize marketing strategies
- ◆ Improve decision making in digital business with the data obtained

### **Module 7. Improving IT Projects and Businesses through Analytical Techniques**

- ◆ Analyze Digital Marketing campaigns so they align with the global business strategy
- ◆ Apply the proposed drive techniques to improve results
- ◆ Generate specialized knowledge of Digital Marketing with special emphasis on Digital Campaigns
- ◆ Determine the different types of campaign exclusions, control and apply them to mitigate risks in executing Digital Marketing campaigns

### **Module 8. Quality in Software Project Management and Implementation**

- ◆ Monitor Software Development processes and final products
- ◆ Ensure the Development Project implements the established Quality procedures and standards
- ◆ Notify stakeholders of the Quality actions taken
- ◆ Identify deficiencies in products, processes or standards and correct them

### **Module 9. Regulatory compliance for information security in technology projects**

- ◆ Examine data protection regulation
- ◆ Establish the bases that legitimize personal data processing
- ◆ Develop techniques to ensure compliance with data protection regulations
- ◆ Establish security regulatory frameworks and main security-related certifications available

### **Module 10. Team Management in IT Projects**

- ◆ Develop management skills to maximize performance in a technology company
- ◆ Determine leadership as a support model with respect to traditional authoritarian methodologies
- ◆ Contemplate emotional intelligence as a basic tool to optimize company results
- ◆ Develop strategies for favorable conflict resolution and negotiation techniques



“*TECH provides you with all the knowledge you need to be the best Technology Leader possible. Take the step and start to build your future”*

# 03 Skills

IT professionals who take this Professional Master's Degree in Advanced Technology Project Management will be able to assume the Project Manager role from a global perspective of all the challenges and complications that may arise in the process. This makes students valuable assets in the industry, with a unique set of expertise and the ability to take on the most serious and demanding projects.





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*This Professional Master's Degree is the education you were looking for to boost your career in the IT industry. Become a leader and enroll now”*



## General Skills

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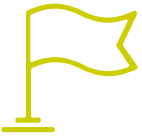
- ◆ Understand all the aspects involved in the Management of a Technology Work Team
- ◆ Know which work Methodology to use in each part of the Project Development, maximizing results
- ◆ Make intelligent use of all the data generated and collected by the work team to make Decisions with the maximum possible information
- ◆ Deal with any kind of problems within the team, either personal or professional



*Nothing will catch you by surprise with all the expertise you will acquire in this Professional Master's Degree in Advanced Technology Project Management"*







## Specific Skills

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- ◆ Develop PMI Methodology for Project Management
- ◆ Analyze Agile Methodologies for Project Management
- ◆ Develop the elements and Processes in the Scrum Framework and Kanban Method
- ◆ Integrate Process Analysis and requirements within Project Management Methodologies
- ◆ Establish best practices in Data Management that ensure the integrity of designed Information Systems
- ◆ Study the phases of the Data Life Cycle and their relationship to a Project Management Strategy and Quality Management Strategy
- ◆ Identify and design good Enterprise Resource Planning and Customer Relationship Management for the enterprise
- ◆ Successfully manage Enterprise Resource Planning and Customer Relationship Management Systems with specific skills for them
- ◆ Examine Project and Process Control and Monitoring
- ◆ Design Control Strategies
- ◆ Propose advanced solutions to problems that may arise in companies, integrating techniques and methods studied
- ◆ Determine data life cycle phases
- ◆ Develop Technological Trends for the Control and Monitoring of Projects and Processes
- ◆ Analyze a Web or Digital Platform and optimize the way in which the user interacts with its various functionalities
- ◆ Generate reports and make the necessary changes to achieve the established objectives
- ◆ Examine a Client's Life Cycle and the necessary actions to be carried out in each Phase
- ◆ Analyze the expected results of the Products according to the given specifications
- ◆ Review and audit the New Software Development Product and its related activities throughout the Development Cycle
- ◆ Determine the main safety measures to be taken into account during the Development of a Project
- ◆ Adapt the Technological Company to the Society of Change

04

# Course Management

In order to instruct its students in the best possible way, TECH strives to find the most qualified professionals and experts in each field to offer and direct training programs. It is for this reason that this Professional Master's Degree has a highly qualified teaching staff in the field of Technological Management, with extensive experience leading teams in a multitude of situations. This guarantees that students have access to quality teaching material, updated to the new demands and realities in the technology sector.



“

*Get to the top of the best technology companies supported by a team of professionals who will help you along the way”*

## Management



### Dr. Peralta Martín-Palomino, Arturo

- ◆ CEO and CTO at Prometheus Global Solutions
- ◆ CTO en Corporate Technologies in Corporate Technologies
- ◆ CTO in AI Shephers GmbH
- ◆ Doctorate in Psychology from the University of CastillaLa
- ◆ PhD in Economics, Business and Finance from the Camilo José Cela University. Outstanding Award in her PhD
- ◆ PhD in Psychology, University of CastillaLa Mancha
- ◆ Master's Degree in Advanced Information Technologies from the University of Castilla la Mancha
- ◆ Master MBA+E (Master's Degree in Business Administration and Organisational Engineering) from the University of Castilla la Mancha
- ◆ Associate lecturer, teaching Undergraduate and Master's Degrees in Computer Engineering at the University of Castilla la Mancha
- ◆ Professor of the Master in Big Data and Data Science at the International University of Valencia.
- ◆ Lecturer on the Master's Degree in Industry 4.0 and the Master's Degree in Industrial Design and Product Development
- ◆ Member of the SMILe Research Group of the University of Castilla la Mancha

## Professors

### Mr. Gómez Esteban, Enrique

- ◆ Oracle database administrator at NATO, Alten, ViewNext, Everis and Psa Group (Peugeot)
- ◆ Project Manager at Telefónica
- ◆ Head of Safety at FNMT
- ◆ Technical Advisor at IBM Sterling and IBM Aspera
- ◆ Software Engineer at NCR Corporation
- ◆ Computer Expertise in Commercial/Civil, Criminal and Extrajudicial areas in the Community of Madrid
- ◆ Computer Engineer, Polytechnical University of Madrid
- ◆ Master's Degree in IT Safety and Communication, Polytechnic University of Madrid

**Mr. Fondón Alcalde, Rubén**

- ◆ Business Analyst in Customer Value Management at Vodafone Spain
- ◆ Head of Service Integration at Entelgy for Telefónica Global Solutions
- ◆ Online Account Manager for Clone Servers at EDM Electronics
- ◆ Business Analyst for Southern Europe at Vodafone Global Enterprise
- ◆ Telecommunications Engineer, European University of Madrid
- ◆ Master's Degree in Big Data and Analytics, International University of Valencia

**Mr. Tato Sánchez, Rafael**

- ◆ Project Management and Technical Director at Indra Sistemas
- ◆ Responsible for Traffic Control and Management Center of the General Direction of Traffic in Madrid
- ◆ Systems Engineer at ENA Traffic
- ◆ Degree in Industrial Electronics and Automation Engineering, European University of Madrid
- ◆ Industrial Technical Engineer in Electricity, Universidad Politécnica de Madrid
- ◆ Master's Degree in Industry 4.0, International University of La Rioja

**Mr. García Niño, Pedro**

- ◆ Specialist in Web Positioning and SEO/Google Ads
- ◆ SEO On-Page / Off-Page Specialist
- ◆ Google Ads Specialist (SEM / PPC), Official Certification
- ◆ Specialist in Google Analytics/Digital Marketing Analytics and Performance Measurement
- ◆ Specialist in Digital Marketing and RRSS
- ◆ IT Services Sales Manager
- ◆ Computer Equipment Technician Hardware/Software Specialist

**Ms. García La O, Marta**

- ◆ Management, Administration and Account management at Think Planning and Development
- ◆ Organization, supervision and mentoring of senior management training courses at Think Planning and Development
- ◆ Accountant-administrator at Tabacos Santiago and Zaráiche-Stan Roller
- ◆ Marketing Specialist at Versas Consultores
- ◆ Diploma in Business Studies from the University of Murcia
- ◆ Master's Degree in Sales and Marketing Management, Fundesem Business School

**Ms. Palomino Dávila, Cristina**

- ◆ Consultant and Senior GRC Auditor at Oesía Networks
- ◆ Audit Sub-Directorate - General Secretariat in Compañía Logística de Hidrocarburos CLH
- ◆ Senior consultant and auditor in the field of Personal Data Protection and information society services at Helas Consultores
- ◆ Graduate in Law from the University of Castilla La Mancha
- ◆ Master's Degree in Legal Consultancy for Businesses from the Instituto de Empresa
- ◆ Advanced Course in Digital Security and Crisis Management, University of Alcalá and the Spanish Security and Crisis Alliance (AESYC)

**Ms. Martínez Cerrato, Yésica**

- ◆ Project Manager in the area of Key Accounts Integration at Correos and Telégrafos
- ◆ Computer Technician Responsible for OTEC computer classrooms at the University of Alcalá
- ◆ Electronic Security Product Technician at Securitas Security Spain
- ◆ Digital Transformation Manager and Business Intelligence Analyst at Ricopia Technologies
- ◆ Computer classes teacher at ASALUMA Association
- ◆ Degree in Electronic Communications Engineering at the University of Alcalá, Spain

# 05

# Structure and Content

The syllabus includes all the knowledge and methodologies necessary for students to face any kind of Technological Development Project. In addition, the content is written in a clear and precise way, supported by numerous practical examples to facilitate reading and learning. It is structured in 10 modules which, in turn, are divided into 10 topics. Each of these topics is well defined and organized, helping the student to quickly consult any type of doubt.



“

*Made by the best experts that TECH has been able to gather, you will find all the keys to become a successful leader in this Professional Master's Degree in Advanced Technology Project Management”*

## Module 1. Agile Technology Project Direction and Management

- 1.1. Project Management
  - 1.1.1. Project Direction and Management
  - 1.1.2. Phases to a Project
- 1.2. Project Management according to the Project Management Institute
  - 1.2.1. PMI and PMBOK
  - 1.2.2. Project, Program and Project Portfolio
  - 1.2.3. Evolution and Process Assets at Organizations That Work with Projects
- 1.3. Process Management according to the Process Management Institute
  - 1.3.1. Process Groups and Knowledge Areas
  - 1.3.2. Process Matrix
- 1.4. Agile Methodologies for Project Management
  - 1.4.1. Application Motivation
  - 1.4.2. Agile Values and Principles of the Agile Manifesto
  - 1.4.3. Application Scenarios
- 1.5. Scrum for Agile Project Management: Framework Description
  - 1.5.1. Agile Management Framework
  - 1.5.2. Scrum Pillars and Values
- 1.6. Scrum for Agile Project Management: Application Models
  - 1.6.1. Framework Application
  - 1.6.2. People, Roles and Responsibilities on Scrum
  - 1.6.3. Sprint Planning, Daily Scrum, Sprint Review, Sprint Retrospective and Sprint Refinement
- 1.7. Scrum for Agile Project Management
  - 1.7.1. Product Backlog, Sprint Backlog and Incremental Backlog
  - 1.7.2. Scrum Team Agreements
  - 1.7.3. Performance Assessment
- 1.8. Kanban for Agile Project Management
  - 1.8.1. The Model
  - 1.8.2. Kanban Method, Elements and Benefits
  - 1.8.3. Typical Usage Scenarios

- 1.9. Kanban for Agile Project Management: Model Application
  - 1.9.1. Fundame
  - 1.9.2. Application
  - 1.9.3. Performance Assessment
- 1.10. Project Management Model Selection
  - 1.10.1. Criteria for Selecting a Management Model Type
  - 1.10.2. Traditional Methods vs. Agile Methods
  - 1.10.3. Conclusions

## Module 2. Requirements Management and Process Analysis in Software Development Projects

- 2.1. Systems Analysis
  - 2.1.1. Systems Analysis Functions
  - 2.1.2. Software Development Cycle: SDLC, OO Agile
  - 2.1.3. SDLC, OO and Agile
- 2.2. Importance of System Analysis and Design
  - 2.2.1. Information Systems
  - 2.2.2. Integrating IT Technologies: HW and Software
  - 2.2.3. Methodology Selection
- 2.3. Software Development Life Cycle
  - 2.3.1. Campaigns and Types
  - 2.3.2. Redemption and Drive
  - 2.3.3. Types of Strategies
  - 2.3.4. Digital Marketing Plans
- 2.4. Systems Model and Design: Integration
  - 2.4.1. Dependencies with Other Operating Systems in the Organization
  - 2.4.2. Integration with Project Management Methodologies such as PMBOOK
  - 2.4.3. Integration with Agile Methodologies
- 2.5. Requirements
  - 2.5.1. Interactive Methods: Interviews, JAD and Questionnaires
  - 2.5.2. Non-interactive Methods: Observation, Document Review
  - 2.5.3. Sampling Techniques: Sampling



- 2.6. Processes Analysis: DFD
    - 2.6.1. Multilevel DFD Development
    - 2.6.2. DFD Types: Physical and Logical, Based on Events
    - 2.6.3. DFD Partitioning
  - 2.7. Processes Analysis: Data Dictionary
    - 2.7.1. Creating Data Dictionaries Based on Previous DAfD
    - 2.7.2. Data Dictionary Nomenclature
    - 2.7.3. XML Creation for Data Exchange with Other Systems
  - 2.8. Processes Analysis: Processes Specifications
    - 2.8.1. Structured and Semi-structured Decisions
    - 2.8.2. If-The-Else
    - 2.8.3. Decision Tables and Trees
  - 2.9. Importance of Design
    - 2.9.1. Output Design
    - 2.9.2. Input Design
    - 2.9.3. Validating Design
  - 2.10. Database Design
    - 2.10.1. Data Standardization
    - 2.10.2. E-R Diagrams: One-to-many and Many-to-many Relations
    - 2.10.3. Destandardization
- Module 3. Business Management: Resource and Customer Management Technologies**
- 3.1. Enterprise Information Management and Storage Systems
    - 3.1.1. Enterprise Resource Planning
    - 3.1.2. Customer Relationship Management
    - 3.1.3. Enterprise Resource Planning vs. Customer Relationship Management
    - 3.1.4. Enterprise Resource Planning and Management Customer Relationship Management in Companies
  - 3.2. Enterprise Resource Planning
    - 3.2.1. Benefits of Enterprise Resource Planning in Companies
    - 3.2.2. Implementation and Management
    - 3.2.3. Enterprise Resource Planning Day-to-day
  - 3.3. Enterprise Resource Planning Management
    - 3.3.1. ERO Modules
    - 3.3.2. Enterprise Resource Planning Systems Types
    - 3.3.3. Market Tools
  - 3.4. Customer Relationship Management
    - 3.4.1. Implementing Customer Relationship Management in Companies
    - 3.4.2. Information System Design
    - 3.4.3. Management Customer Relationship Management for Improvement Processes
  - 3.5. Management Customer Relationship Management for Project Design
    - 3.5.1. Current Situation
    - 3.5.2. Sales or Loyalty
    - 3.5.3. Customer Loyalty Profitability
  - 3.6. Customer Relationship Management: Working with Information
    - 3.6.1. Project Marketing and Management
    - 3.6.2. Success Factors
    - 3.6.3. Strategies
  - 3.7. Customer Relationship Management: Communication Tools
    - 3.7.1. Communication
    - 3.7.2. Information
    - 3.7.3. Active Listening
    - 3.7.4. Investment Strategies in Information Systems
  - 3.8. Customer Relationship Management: Dissatisfied Customer Recovery
    - 3.8.1. Detecting Errors in Time
    - 3.8.2. Correcting and Remediating Errors
    - 3.8.3. Customer Recovery and Continuous Improvement Process Design
  - 3.9. Computer Projects
    - 3.9.1. Objectives
    - 3.9.2. Enterprise Resource Planning and Customer Relationship Management for Attracting Customers
    - 3.9.3. Projects Design
    - 3.9.4. Assessing and Recording Results

- 3.10. Computer Project Development
  - 3.10.1. Frequent Errors
  - 3.10.2. Methodology
  - 3.10.3. Segmentation and Processes
  - 3.10.4. Training
  - 3.10.5. Actions Design Applied to Management Customer Relationship Management and Enterprise Resource Planning

#### Module 4. IT Projects Management and Control Using Business Intelligence

- 4.1. Business Intelligence
  - 4.1.1. Business Intelligence
  - 4.1.2. Data Management
  - 4.1.3. Data Life Cycle
  - 4.1.4. Architecture
  - 4.1.5. Applications
- 4.2. IT Projects Management Using Analytical Techniques
  - 4.2.1. Business Intelligence Selection
  - 4.2.2. Benefits of Business Intelligence for Projects
  - 4.2.3. Examples and Applications
- 4.3. Harvesting and Storage
  - 4.3.1. Business Models and Data Models
  - 4.3.2. Types of Storage
  - 4.3.3. Storing Big Data in the Cloud
- 4.4. Massive Data and Information Processing
  - 4.4.1. Types of Database Processing
  - 4.4.2. Techniques to Simplify Massive Processing
  - 4.4.3. Cloud Processing
- 4.5. Analytical Techniques
  - 4.5.1. Analytical Techniques
  - 4.5.2. Predictive Analyses
  - 4.5.3. Pattern Analysis and Recommendation
  - 4.5.4. Scalable Machine Learning

- 4.6. Visualization for Decision-Making
  - 4.6.1. Visualization and Data Analysis
  - 4.6.2. Tools
  - 4.6.3. Data Analysis Visualization
  - 4.6.4. Reports Design
- 4.7. Business Information Consumption
  - 4.7.1. Control Panel
  - 4.7.2. KPI Design and Extraction
  - 4.7.3. Geographic Information
- 4.8. Security and Governance
  - 4.8.1. Security
  - 4.8.2. Governance
- 4.9. Real Applications to IT Projects
  - 4.9.1. From Harvesting to Processing
  - 4.9.2. From Analysis to Visualization
- 4.10. Project Management
  - 4.10.1. Projects
  - 4.10.2. Requirements and Objectives
  - 4.10.3. Start-up and Implementation

#### Module 5. IT Project Strategic Monitoring and Control

- 5.1. Data and Information in Decision-Making and Project Management
  - 5.1.1. Business Intelligence
  - 5.1.2. Business Intelligence Concept Evolution
  - 5.1.3. Data Life Cycle
- 5.2. Information Analysis Techniques
  - 5.2.1. Descriptive Analytics
  - 5.2.2. Prescriptive Analytics
  - 5.2.3. Predictive Analytics
  - 5.2.4. Pattern Analysis and Recommendation
  - 5.2.5. Benefits of Computer Projects Analysis

- 5.3. Types of Data
  - 5.3.1. Structured Data
  - 5.3.2. Semi-Structured Data
  - 5.3.3. Unstructured Data
- 5.4. Storage and Management
  - 5.4.1. Data Lake, Data Warehouse and Data Mart
  - 5.4.2. Stages in Data Management: Extraction, Transformation and Loading
  - 5.4.3. ETL and ELT Paradigm
- 5.5. Data Management for Project Implementation
  - 5.5.1. Data Use in Project Design
  - 5.5.2. Decision Making
  - 5.5.3. Benefits
- 5.6. Business Intelligence Solutions: Power BI
  - 5.6.1. Ecosystem
  - 5.6.2. Potential Strengths and Weaknesses
- 5.7. Business Intelligence Solutions: Tableau
  - 5.7.1. Ecosystem
  - 5.7.2. Strengths and Weaknesses
- 5.8. Business Intelligence Solutions: Qlik
  - 5.8.1. Ecosystem
  - 5.8.2. Potential Strengths and Weaknesses
- 5.9. Business Intelligence Solutions: Prometeus
  - 5.9.1. Ecosystem
  - 5.9.2. Potential Strengths and Weaknesses
- 5.10. Future of Business Intelligence
  - 5.10.1. Cloud Applications
  - 5.10.2. Self-consumption Business Intelligence
  - 5.10.3. Integration with Data Science: Value Creation



## Module 6. Digital Analytics for Decision- Making in Technology Projects

- 6.1. Digital Analytics
  - 6.1.1. Digital Analytics
  - 6.1.2. Modus Operandi
- 6.2. Google Analytics: Analysis Tools
  - 6.2.1. Google Analytics
  - 6.2.2. Quantifying and Qualifying: Metrics and Dimensions
  - 6.2.3. Analysis Objectives
- 6.3. Metrics
  - 6.3.1. Basic Metrics
  - 6.3.2. KPI (Key Performance Indicators) or Advanced Metrics
  - 6.3.3. The Objective: Conversion
- 6.4. Dimensions
  - 6.4.1. Campaign/Keyword
  - 6.4.2. Source/Media
  - 6.4.3. Contents
- 6.5. Google Analytics
  - 6.5.1. Tool Set-up and Configuration
  - 6.5.2. Current Versions: UA/GA4
  - 6.5.3. Conversion Objectives: Conversion Funnels
- 6.6. Google Analytics Structure: Work Areas
  - 6.6.1. Accounts
  - 6.6.2. Properties
  - 6.6.3. Views
- 6.7. Google Analytics Reports
  - 6.7.1. In Real Time
  - 6.7.2. Audience
  - 6.7.3. Acquisition
  - 6.7.4. Behavior
  - 6.7.5. Conversions

- 6.8. Google Analytics Advanced Reports
  - 6.8.1. Personalized Reports
  - 6.8.2. Panels
  - 6.8.3. API
- 6.9. Filtering
  - 6.9.1. Filtering and Segmentation: Usability
  - 6.9.2. Predefined Segments and Personalized Segments
  - 6.9.3. Remarketing Lists
- 6.10. Digital Analytics Plan
  - 6.10.1. Measurement
  - 6.10.2. Implementation in the Technological Environment
  - 6.10.3. Conclusions

## Module 7. Improving IT Projects and Businesses Using Analytical Techniques

- 7.1. Company Data Analytics
  - 7.1.1. Company Data Analytics
  - 7.1.2. Value
  - 7.1.3. Project Management According to Value
- 7.2. Digital Marketing
  - 7.2.1. Digital Marketing
  - 7.2.2. Benefits of Digital Marketing
- 7.3. Digital Marketing: Preparation
  - 7.3.1. Campaigns
  - 7.3.2. Implementation and Measurement
  - 7.3.3. Digital Strategy Variants
  - 7.3.4. Plan
- 7.4. Digital Marketing: Implementation
  - 7.4.1. Applications
  - 7.4.2. Integration in Web Environments
- 7.5. Life Cycle
  - 7.5.1. Customer Journey vs. Campaigns
  - 7.5.2. Measurement

- 7.6. Data Management
    - 7.6.1. Datawarehouse and Datalab
    - 7.6.2. Applications for the Generation of Campaign Bases
    - 7.6.3. Drive Options
  - 7.7. Campaign Exclusions
    - 7.7.1. Types
    - 7.7.2. GDPR and Robinson
    - 7.7.3. Data Anonymization
  - 7.8. Control Panels
    - 7.8.1. Audience
    - 7.8.2. Storytelling
    - 7.8.3. Applications
  - 7.9. Value Conclusions in Data Analytics
    - 7.9.1. Customer Global Vision
    - 7.9.2. Analysis Strategy and Types
    - 7.9.3. Applications
  - 7.10. Application in Business Scenarios
    - 7.10.1. Wallet Clustering
    - 7.10.2. Predictive Risk Models
    - 7.10.3. Wallet Customers Characterization
    - 7.10.4. Image Processing
    - 7.10.5. Bid Proposal Forms
- 8.3. Data Quality through Input Validation
    - 8.3.1. Efficient Data Capture
    - 8.3.2. Data-Entry Models: OCR, Keyboard, RFID, etc.
    - 8.3.3. Data Validation Tests
  - 8.4. Total Quality Management: Six Sigma
    - 8.4.1. TQM
    - 8.4.2. Six Sigma: Methodology and Culture
    - 8.4.3. Top-Down Design Systems and Modular Programming
    - 8.4.4. Documentation: Folklore Documentation Method
  - 8.5. Tests, Maintenance and Audits
    - 8.5.1. Test Processes
    - 8.5.2. Using Test Data
    - 8.5.3. Audits and External Auditing
  - 8.6. Quality of Network Implemented Products
    - 8.6.1. Client-Server Technology
    - 8.6.2. Cloud Computing Technology
  - 8.7. User Training
    - 8.7.1. User Training Strategies
    - 8.7.2. Training Guides
  - 8.8. Conversion/Migration to New Systems Strategies
    - 8.8.1. Migration Strategies: Parallel, Gradual
    - 8.8.2. Migration/Conversion Plans
    - 8.8.3. Data Owners Management
  - 8.9. Security
    - 8.9.1. Physical and Logical Security: Document Destruction
    - 8.9.2. e-Commerce
    - 8.9.3. Disaster-Recovery Plans
  - 8.10. Evaluation
    - 8.10.1. Quality Assessment Techniques
    - 8.10.2. Evaluation in Web Environments
- Module 8. Quality in Software Project Management and Implementation**
- 8.1. Software Quality
    - 8.1.1. Methodologies and Standards
    - 8.1.2. Software Quality Reports: Standish Group Chaos Report
    - 8.1.3. Software Quality Certifications: ISO and AENOR
  - 8.2. Secure Codification
    - 8.2.1. Codification: Reasons and Types of Codes
    - 8.2.2. Codification Rules

## Module 9. Regulatory Compliance for Information Security in Technology Projects

- 9.1. Data Protection Regulation
  - 9.1.1. Regulatory Framework
  - 9.1.2. Subjects Obligated to Comply with Regulations
    - 9.1.2.1. Data controllers, Co-responsible Parties and Data Processors
  - 9.1.3. Data Protection Officer
- 9.2. Treatment of Personal Data
  - 9.2.1. Fairness, Loyalty and Transparency
  - 9.2.2. Purpose Limitation
  - 9.2.3. Data Minimization, Accuracy and Shelf-Life Limitation
  - 9.2.4. Integrity and Confidentiality
  - 9.2.5. Proactive Responsibility
- 9.3. Data Protection by Design and by Default
  - 9.3.1. Data Pseudonymization
  - 9.3.2. Data Minimization
  - 9.3.3. Organizational Measures in Accordance with the Purpose of Processing
- 9.4. Bases of Lawfulness or Legitimacy and Authorizations for Processing: Data Communication
  - 9.4.1. Consent
  - 9.4.2. Contractual Relationship or Precontractual Measures
  - 9.4.3. Fulfilling Legal Obligations
  - 9.4.4. Vital Interests Protection for Interested Parties or Others
  - 9.4.5. Public Interest or Exercise of Public Powers
  - 9.4.6. Legitimate Interests: Interest Weighting
- 9.5. Individuals Rights
  - 9.5.1. Transparency and Information
  - 9.5.2. Access
  - 9.5.3. Rectification and Deletion (Right to Be Forgotten), Limitation and Portability
  - 9.5.4. Opposition and Automated Individual Decisions
  - 9.5.5. Limits to Rights
- 9.6. Risks Analysis and Management of Personal Data Processing
  - 9.6.1. Identification of Risks and Threats to the Rights and Freedoms of Individuals
  - 9.6.2. Risk Assessment
  - 9.6.3. Risk Management Plans

- 9.7. Techniques to Ensure Data Protection Regulations Compliance
  - 9.7.1. Identification of Proactive Accountability Measures
  - 9.7.2. Processing Activities Register
  - 9.7.3. Security Breach Management
  - 9.7.4. Codes of Conduct and Certifications
- 9.8. Data Protection Impact Assessment (DPA or DPIA)
  - 9.8.1. Studying the Need for DPIA
  - 9.8.2. Assessment Methodology
  - 9.8.3. Risk and Threat Identification
  - 9.8.4. Prior Consultation with the Control Authority
- 9.9. Information Security
  - 9.9.1. Security Regulatory Framework
  - 9.9.2. ICT Security Products Assessment and Certification
  - 9.9.3. STIC Products and Services Catalog (CPSTIC)
- 9.10. Control Authorities: Violations and Penalties
  - 9.10.1. Violations
  - 9.10.2. Fines
  - 9.10.3. Penalty Procedure
  - 9.10.4. Control Authorities and Cooperation Mechanisms

## Module 10. Team Management in IT Projects

- 10.1. Group Management
  - 10.1.1. Management Skills
  - 10.1.2. Human Capital Management and Managerial Functions
  - 10.1.3. Classification and Types of Management Skills
  - 10.1.4. Group Leadership Management in Companies
- 10.2. Team Building
  - 10.2.1. Team Management
  - 10.2.2. Performance Evaluation
  - 10.2.3. Delegation and Empowerment
  - 10.2.4. Commitment Management

- 10.3. Work Teams
  - 10.3.1. Culture: Mission, Vision, Values
  - 10.3.2. Planning and Strategy
  - 10.3.3. Organization and Monitoring
  - 10.3.4. Feedback and Feedforward
  - 10.3.5. Results Assessment
- 10.4. Stages in Team Training
  - 10.4.1. Dependence Stage
  - 10.4.2. Counter-Dependence Stage
  - 10.4.3. Independence Stage
  - 10.4.4. Interdependence Stage
- 10.5. Computer Projects Organization
  - 10.5.1. Company Planning
  - 10.5.2. Time Planning
  - 10.5.3. Resource Planning
  - 10.5.4. Costs Planning
- 10.6. Talent Management in Companies
  - 10.6.1. Talent
  - 10.6.2. Talent Management
  - 10.6.3. Talent Dimensions
  - 10.6.4. Attracting Talent
- 10.7. Company Communication
  - 10.7.1. Communication Process in Companies
    - 10.7.1.1. Internal Relationships and Communication in Companies
    - 10.7.1.2. Relation between Company Organization and Communication: Centralization or Decentralization
    - 10.7.1.3. Internal and External Communication Strategy
  - 10.7.2. Interpersonal Relationships in Companies
    - 10.7.2.1. Interpersonal Communication and Conflicts
    - 10.7.2.2. Communication Filters and Barriers
    - 10.7.2.3. Criticism and Active Listening
    - 10.7.2.4. Active Listening Techniques
- 10.8. Negotiation Techniques in Companies
  - 10.8.1. Negotiation at the Managerial Level in Technology Companies
    - 10.8.1.1. Negotiation
    - 10.8.1.2. Negotiation Styles
    - 10.8.1.3. Negotiation Phases
  - 10.8.2. Negotiation Techniques
    - 10.8.2.1. Negotiation Strategies and Tactics
    - 10.8.2.2. Negotiation Types
  - 10.8.3. The Negotiator
    - 10.8.3.1. Negotiator Characteristics
    - 10.8.3.2. Types of Negotiators
    - 10.8.3.3. Psychology in Negotiation
- 10.9. Coaching and Business Management
  - 10.9.1. Business Coaching
  - 10.9.2. Coaching Practice
  - 10.9.3. Coaching in Organizations
- 10.10. Mentoring and Business Management
  - 10.10.1. Mentoring
  - 10.10.2. The Four Processes of a Mentoring Program
    - 10.10.2.1. Processes
    - 10.10.2.2. Mentors in Companies
    - 10.10.2.3. Protégés in Technological Companies
  - 10.10.3. Benefits of Mentoring in Companies
    - 10.10.3.1. Benefits for the Organization: Mentor and Mentored
  - 10.10.4. Differences between Mentoring and Coaching

06

# Methodology

This training program offers 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"*

### At TECH we use the Case Method

Our program offers a revolutionary method of skills and knowledge development. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

“

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



*We are the first online university to combine Harvard Business School case studies with a 100% online learning system based on repetition.*



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

### **A learning method that is different and innovative.**

This intensive Information Technology program at TECH Technological University prepares you to face all the challenges in this field, both nationally and internationally. We are committed to promoting your personal and professional growth, the best way to strive for success, that is why at TECH Technological University you will use Harvard case studies, with which we have a strategic agreement that allows us, to offer you material from the best university in the world.

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

The case method has been the most widely used learning system among the world's leading Information Technology schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the course, students will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

## Relearning Methodology

Our university is the first in the world to combine Harvard University case studies with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance Harvard case studies with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only university in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650.000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



### Practising Skills and Abilities

They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist 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

They will complete a selection of the best case studies in the field used at Harvard. 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 multimedia content presentation training Exclusive system 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 your goals.



# 07 Certificate

The Professional Master's Degree in Advanced Technology Project Management guarantees, in addition to the most rigorous and up-to-date training, access to a qualification issued by TECH Technological University.





“

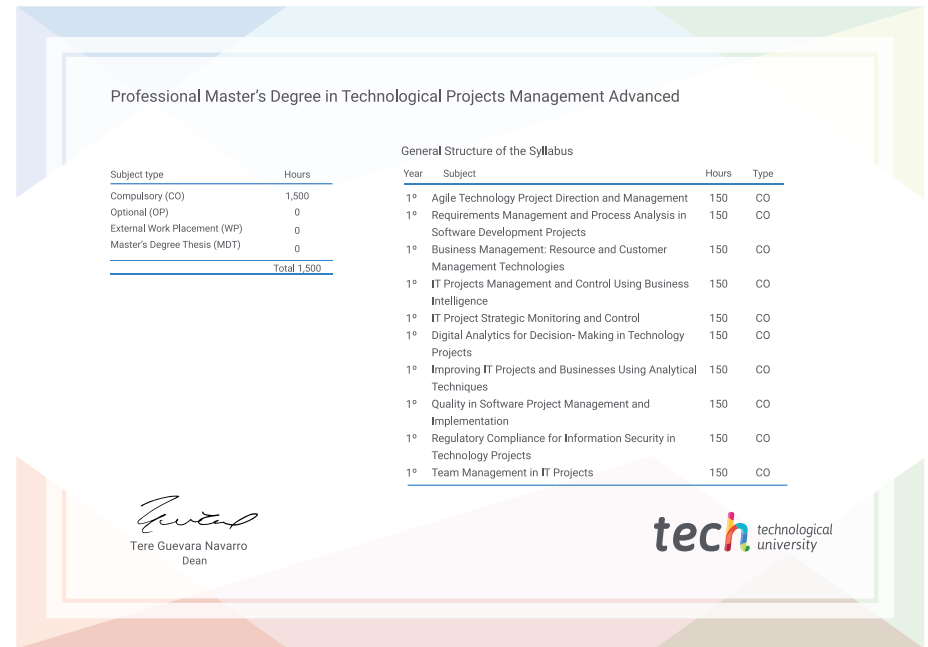
*Successfully complete this program and receive your diploma without the hassle of travel or paperwork”*

This **Professional Master's Degree in Advanced Technology Project Management** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Professional Master's Degree** diploma issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Professional Master's Degree in Technological Projects Management Advanced**  
Official N° of hours: **1,500 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.

health future  
confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning



## Professional Master's Degree Advanced Technology Project Management

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

# Professional Master's Degree

## Advanced Technology Project Management