

Advanced Master's Degree Technological Project Management



Advanced Master's Degree Technological Project Management

- » Modality: online
- » Duration: 2 years
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitute.com/us/information-technology/advanced-master-degree/advanced-master-degree-technological-project-management

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01

Introduction

From Tesla, Google, Amazon, Netflix, Spotify to Amazon Prime have used IT professionals for the development of their projects. A task that requires knowledge not only of the development field, but also of the work methodology, its management and coordination. A transcendental part for the successful achievement of the business objective. For this reason, TECH focuses its attention in this academic proposal on the techniques, tools and latest trends for the Technological Project Management. All this, in a 100% online pedagogical format and with the most innovative didactic material of the academic panorama, accessible 24 hours a day, from a digital device with internet connection.



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Start up with total guarantee any first level IT project in the technological sector with the teaching acquired in this Advanced Master's Degree"

The development of e-commerce platforms, the implementation of Artificial Intelligence, Cloud infrastructure, and the creation of Virtual and Augmented Reality applications require high-level work from IT professionals.

For this reason, this profile has become very important in recent years for large companies wishing to create disruptive projects. To facilitate this progression in a leading sector, TECH has created this Advanced Master's Degree in Technology Project Management of 3,000 hours of intensive and advanced learning.

This is a 24-month program, which allows the graduate to take an academic journey through the technical elements for setting objectives, time management, cost management, defining the quality of the same, as well as monitoring through the most sophisticated tools.

All this, in addition, with a very useful knowledge for the improvement of actions, decision making or the coordination of multidisciplinary teams. A theoretical-practical itinerary that will be complemented by video summaries of each topic, videos in detail, specialized readings and case studies that can be accessed comfortably from any digital device with internet connection.

The professional is before an ideal academic option to be able to obtain a notorious progression in his career at the same time that he studies a first level degree. And the fact is that, without the obligation to attend classes in a center, or have fixed schedules, students have greater freedom to self-manage their study time and reconcile their daily activities with a cutting-edge teaching.

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

- ◆ The development of case studies presented by experts in Technology Project planning, development and Management
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Special focus on innovative methodologies in projects in the sector IT and technological
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



An academic option that will allow you to keep abreast of the latest trends and emerging practices in project management and leadership"

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Fulfill the legal requirements in information security in technological projects with the knowledge you will acquire in this course"

Learn more about the benefits of obtaining the PMP® or CAPM® Certification with this university degree.

Thanks to the multimedia pills and case studies you will get a dynamic learning about the Technological Project Management.

Its teaching staff includes professionals from the technological field, who contribute their work experience to this program, as well as renowned specialists from prestigious companies and 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 an immersive learning experience designed to prepare for real-life situations.

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



02 Objectives

TECH provides students with multiple pedagogical tools that will allow them to obtain a solid learning in the management of technological projects and the necessary skills to lead teams and projects in today's business world. Thus, at the end of this degree, the IT professional will have sufficient capacity to lead complex projects, manage and make effective decisions in changing situations or obtain PMP® or CAPM® certifications.



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The case studies provided by this program will help you advance professionally in an industry where competitiveness reigns”



General Objectives

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





Specific Objectives

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

- ◆ Introduce students to the basic concepts of Technology Project Management, such as the role of the manager and the definition of the project
- ◆ Know the regulations and best practices of technology project management, Prince 2, PMP and ISO 21500:2012
- ◆ Define the plan for the design and management of Technology Projects

Module 2. Scope management of technology projects

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

Module 3. Time management of technology projects

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

Module 4. Cost management of technology projects

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

Module 5. Quality management of technological projects

- ◆ Sizing the importance of project quality management, differentiating between "quality" and "grade"
- ◆ Know the different theories applied to quality, such as the one proposed by Edwards Deming
- ◆ Analyze the ISO 21500 standard, studying its history, objectives and characteristics
- ◆ Learn how to perform a correct quality control, using statistical sampling, questionnaire, impactions, performance reviews, among others

Module 6. Management of technology project resources

- ◆ Identify the responsibilities of each person involved in the project
- ◆ Manage technological resources for their optimal use
- ◆ Carry out practical exercises to learn how to use the various powers of the project manager
- ◆ Develop interpersonal skills, also called "soft skills", which will help to lead, motivate, influence and facilitate group work

Module 7. Communications and Stakeholder Management for Technology Projects

- ◆ Understand the importance of a communications management plan, performing the relevant analysis
- ◆ Master communication skills
- ◆ Conduct practical exercises on the use of communication types in a project
- ◆ Apply emerging trends and practices in the field of communication

Module 8. Technology project risk management

- ◆ Define the threats and opportunities of the project, knowing the different types of threats and opportunities
- ◆ Develop a risk management plan using appropriate tools and techniques
- ◆ Establishing a qualitative and quantitative analysis of project risks
- ◆ Plan and implement a response to the potential risks of a technological job

Module 9. Technology project procurement management

- ◆ Control the main activities of the project manager and the contract
- ◆ Define a procurement strategy to suit different environments and types of contracts
- ◆ Learn how to negotiate with suppliers
- ◆ Search, select and evaluate bids

Module 10. PMP® or CAPM® certification and code of ethics. Emerging trends and practices in technology project management and governance

- ◆ Know what PMP®, CAPM® and PMI® are
- ◆ Identify the advantages and benefits of obtaining PMP® and CAPM® certification
- ◆ Report on professional experience to PMI®

Module 11. Agile Technology Project Direction and Management

- ◆ Generate specialized knowledge on project management and Agile project management
- ◆ Develop PMI Methodology for Project Management
- ◆ Analyze Agile Methodologies for Project Management
- ◆ Develop elements and processes in SCRUM frameworks and KANBAN methods

Module 12. Requirements Management and Process Analysis in Software Development Projects

- ◆ Analyze the different roles and functions of new information systems analysts
- ◆ Examine the different Data Collection Methods
- ◆ Develop DFD and E-R examples of databases

Module 13. Business Management: Technologies for Resource and Customer Management

- ◆ obtained relevant information for decision making
- ◆ Establish direct communication between company departments and customers or clients
- ◆ Determine a Business Strategy
- ◆ Generating customer retention and loyalty skills
- ◆ Develop a Unified Reporting System for each company process
- ◆ Determine Easy Control and Management Systems, accessible in real time

Module 14. IT Project Management and Control through Business Intelligence

- ◆ Develop specialized knowledge to deal with the complexity of making judgments based on information acquired from different information systems
- ◆ Develop or apply data in diverse contexts
- ◆ Solve problems in complex contexts and with incomplete information
- ◆ Combine knowledge and techniques from different disciplines and propose interdisciplinary solutions
- ◆ Effectively communicate analytics results to technical and non-technical audiences
- ◆ Determine business analytics application cases for recurrent problems, known or new, in companies

- ◆ Develop change strategies and practices for digital business transformation through the advanced application of analytical techniques
- ◆ Propose, communicate and elaborate business models or business transformation models justifying their benefits and opportunity for organizations
- ◆ Obtain results related to strategy and data management
- ◆ Develop management skills at the strategic, organizational and project levels, from the point of view of value proposition to the design of business transformation strategies

Module 15. IT Project Strategic Monitoring and Control

- ◆ Determine data life cycle phases: Data, Information, Knowledge and Value
- ◆ Examine the different Analytical Levels: Descriptive Analytics, Prescriptive Analytics, and Predictive Analytics
- ◆ Analyze the differences between different data warehousing paradigms: Data Lake, Data Warehouse and Data Mart
- ◆ Examine the differences between structured, semi-structured and unstructured formats
- ◆ Develop the Extraction (E), Transformation (T) and Loading (L) Phases as well as the different ETL - ELT Paradigms
- ◆ Evaluate the advantages of a set of technology solutions used in business intelligence

Module 16. Digital Analytics for Decision-Making in Technology Projects

- ◆ Determine the meaning of Digital Analytics by knowing its principles
- ◆ Correctly configure the Google Analytics Tool
- ◆ Identify monitoring parameters
- ◆ Differentiate Universal Analytics and Google Analytics 4
- ◆ Determine the structure of Universal Analytics: Accounts, properties and views

- ◆ Analyze User Sessions and Web Traffic in order to better understand the Audience
- ◆ Interpret predefined and/or customized reports
- ◆ Analyze Traffic subsets using Segments
- ◆ Evaluate results and optimize marketing strategies. Improve decision making in digital business with the data obtained

Module 17. Improving IT projects and businesses using analytical techniques

- ◆ Analyze the digital marketing campaign, creation and management, so that it is aligned with an overall digital marketing strategy
- ◆ Apply the proposed drive techniques to improve organization results
- ◆ Examine a client's life cycle and the necessary actions to be carried out in each phase
- ◆ Determine the different types of campaign exclusions, control and apply them to mitigate risks in executing digital marketing campaigns

Module 18. Quality in Software Project Management and Implementation

- ◆ Monitor Software Development processes and final products
- ◆ Ensure that 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
- ◆ Manage unresolved issues to hand them over to the next level of project management

Module 19. Regulatory compliance for information security in technology projects

- ◆ Examine data protection regulation
- ◆ Analyze the different principles that govern personal data processing
- ◆ Establish the bases that legitimize the processing of personal data
- ◆ Compile the rights of individuals in the field of data protection, their exercise and attention
- ◆ Identify and assess risks in order to develop an appropriate risk treatment plan
- ◆ Develop techniques to ensure compliance with Data Protection Regulations
- ◆ Determine the activities and phases in which the Data Protection Impact Assessment Process is structured and the influence of technology on its outcome
- ◆ Establish security regulatory frameworks and main security-related certifications available
- ◆ Compile the violations that can be incurred for regulations non-compliance and associated penalties

Module 20. 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
- ◆ Establish effective communication channels by focusing on verbal and non-verbal language, giving quality to interpersonal relationships in the company
- ◆ Contemplate Emotional Intelligence as a basic tool to optimize company results
- ◆ Apply Coaching to Business Environments
- ◆ Creating mentoring relationships, determining the value to the mentor and mentee and the company's impact
- ◆ Develop strategies for favorable conflict resolution and negotiation techniques





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Apply methodologies such as Agile and Scrum and raise the level of your actions in Technology Projects for large companies”

03 Skills

Thanks to the theoretical and practical approach of this university degree, the IT professional will learn a wide range of technical and leadership skills. They will be able to implement project management methodologies such as Agile and Scrum, efficiently manage databases, programming, network design and computer security. All this, in addition, with case studies that will provide students with the most successful procedures and methodologies.



“

Students will acquire leadership, management and communication skills oriented to today's business environment”



General Skills

- ◆ Design control strategies for project and process monitoring
- ◆ Propose, communicate and elaborate business models or business transformation models justifying their benefits and opportunity for organizations
- ◆ Understand the differences between different data warehousing paradigms: Data Lake, Data Warehouse and Data Mart
- ◆ Analyze web sites or digital platforms to optimize the way users interact with various functionalities
- ◆ Apply techniques based on data analysis to improve the overall results of the organization
- ◆ Review and audit the new software development product and its related activities throughout the development cycle
- ◆ Develop techniques to ensure compliance with data protection regulations within the management of the project
- ◆ Apply coaching in the company environment, improving training processes
- ◆ Understanding the cost of failing to meet project quality
- ◆ Perform quality controls at each stage of the project
- ◆ Gain skills and techniques to manage human resources and be able to resolve conflicts in the team
- ◆ Knowing the emerging trends in the market
- ◆ Develop communication skills
- ◆ Understanding and managing the risks of technology projects





Specific Skills

- ◆ Use the main tools on the market to monitor KPIs and control the execution and progress of any project with respect to the strategy set
- ◆ Apply the Scrum and Kanban methodology correctly and efficiently in projects
- ◆ Develop the most common enterprise information management systems
- ◆ Determine the importance of quality management in software project management and learn to apply the necessary criteria to control it
- ◆ Design a database with process analysis and integrated methodology in project management
- ◆ Learn communication skills, whether verbal or non-verbal, and add quality to the company's interpersonal relationships
- ◆ Establish direct communication between company departments and customers or clients
- ◆ Determine management systems accessible in real time
- ◆ Define strategies for favorable conflict resolution in the use of innovative negotiation techniques
- ◆ Effectively communicate analytics results to technical and non-technical audiences
- ◆ Develop skills and abilities necessary to make decisions in all types of projects, especially technological projects, multidisciplinary contexts and environments
- ◆ Develop the ability to analyze and diagnose business and management problems in the different areas of knowledge of project management
- ◆ Master advanced business management tools to identify and anticipate opportunities, allocate resources, organize information, select, motivate and manage people, make decisions, achieve proposed objectives and evaluate results
- ◆ Provide a global and strategic vision of all operational departments of the company
- ◆ Take responsibility and think in a transversal and integrative way to analyze and solve situations in uncertain environments
- ◆ Develop the minutes of incorporation of technology projects
- ◆ Carry out a comprehensive control of all projects
- ◆ Knowing how to estimate time in each process of project design and development
- ◆ Evaluate the processes and estimate the cost of developing a technology project
- ◆ Give importance to the quality of the projects



Don't get left behind in the most technological era. Enroll in a very useful degree for your professional development in this sector"

04

Course Management

In the search for the highest educational quality, TECH provides students with a program developed by an excellent team of specialists in the technological field. Thus, the graduate has the guarantee of being able to access the most rigorous information for the management and implementation of any technological project. In addition, the extensive professional experience in leading companies will allow them to incorporate the most effective work methodologies and grow in a thriving sector.



“

Succeed with the help of the best experts in the planning and coordination of Technological Projects”

Management



Dr. Romero Mariño, Brunil Dalila

- ♦ Database Administrator. OCREM Association, Granada
- ♦ Software projects and technological architecture consultant for different companies, Venezuela
- ♦ University Professor of Computer Science. Department of Processes and Systems. Simón Bolívar University (USB), Venezuela
- ♦ Researcher in Software Engineering and related areas. Department of Processes and Systems. Simón Bolívar University (USB), Venezuela
- ♦ Internship tutor. Simón Bolívar University, Venezuela
- ♦ University Professor of Computer Science. Systems Engineering School. Bicentenario de Aragua (UBA), Venezuela University
- ♦ Director of the School of Electronics and Coordinator of the Special Degree Projects Commission. University Institute of Technology Antonio José de Sucre (UTS), Venezuela
- ♦ Doctorate in Information and Communication Technologies from the University of Granada (UGR), Spain
- ♦ Systems Engineer from Bicentenario de Aragua University (UBA).. Venezuela
- ♦ Expert in Communications and Data Communication Networks, Central University of Venezuela (UCV)
- ♦ Master's Degree in Systems Engineering, Simón Bolívar University (USB).. Venezuela
- ♦ Member evaluator of doctoral projects of the American University of Europe (UNADE)



Dr. Peralta Martín-Palomino, Arturo

- ♦ CEO and CTO at Prometheus Global Solutions
- ♦ CTO at Korporate Technologies
- ♦ CTO in AI Shephers GmbH
- ♦ Consultant and Strategic Business Advisor at Alliance Medical
- ♦ Director of Design and Development at DocPath
- ♦ PhD in Computer Engineering from the University of Castilla-La Mancha
- ♦ PhD in Economics, Business and Finance from the Camilo José Cela University
- ♦ PhD in Psychology from University of Castilla – La Mancha
- ♦ Master in Executive MBA by the University Isabel I
- ♦ Master's Degree in Sales and Marketing Management, Isabel I University
- ♦ Expert Master's Degree in Big Data by Hadoop Training
- ♦ Master's Degree in Advanced Information Technologies from the University of Castilla - la Mancha: SMILE Research Group

Professors

Mr. Gómez, Esteban Enrique

- ◆ IT expert and Oracle Database Administrator DBA at NATO, Alten, ViewNext, Everis and Psa Group (Peugeot)
- ◆ Project Manager at Telefónica
- ◆ Head of Security 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
- ◆ Postgraduate Master's Degree in Computer Security and Communications from Universidad Politécnica de Madrid

Mr. Fondón Alcalde, Rubén

- ◆ Amazon Web Services EMEA Analyst
- ◆ 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
- ◆ International Services Implementation Manager at Vodafone Global Enterprise
- ◆ Solutions Consultant for Spain and Portugal at Telvent Global Services
- ◆ Business Analyst for Southern Europe at Vodafone Global Enterprise
- ◆ Telecommunications Engineer from the European University of Madrid
- ◆ Master's Degree in Big Data and Data Science from the International University of Valencia

Mr. Tato Sánchez, Rafael

- ◆ Technical Director INDRA SISTEMAS S.A
- ◆ Systems Engineer ENA TRÁFICO S.A.U
- ◆ Master's Degree in Industry 4.0 by Universidad en Internet
- ◆ Master's Degree in Industrial Engineering from the University Europe
- ◆ Industrial Electronics and Automation Engineering Degree from the Universidad Europea
- ◆ Industrial Technical Engineer by Universidad Politécnica de Madrid

Ms. Martínez Cerrato, Yésica

- ◆ Business Analytics and Information Systems Management Expert
- ◆ Product Manager in Electronic Security in Securitas Direct
- ◆ Project Manager of the Large Accounts Integration Area at Correos
- ◆ Business Intelligence Analyst at Ricopia Technologies
- ◆ Teacher in university and post-university studies Graduate in Telecommunications Engineering from the University of Alcalá

Mr. García Niño, Pedro

- ◆ SEO and Search Engine Optimization Specialist
- ◆ Sales Manager for IT services at Camuñase and Electrocamuñas
- ◆ Technical specialist in hardware and software in Camuñase and Electrocamuñas
- ◆ Google Ads Specialist (PPC and SEM)
- ◆ Specialist in SEO On Page and Off Page
- ◆ Specialist in Digital Marketing Analytics and Performance Measurement

Ms. García La O, Marta

- ◆ Specialist in Digital Marketing and Social Networks
- ◆ Management, Administration and Account management at Think Planning and Development SI
- ◆ Senior Management Training Instructor at Think Planning and Development SI
- ◆ Marketing Specialist at Versas Consultores
- ◆ Postgraduate Certificate in Business Studies from the University of Murcia
- ◆ Master's Degree in Sales and Marketing Management, Fundesem Business School

Ms. Palomino Dávila, Cristina

- ◆ Data Protection and Information Security Consultant in Grupo Oesía
- ◆ Deputy Director of Auditing in the General Secretariat of Compañía Logística de Hidrocarburos CLH
- ◆ Consultant in the area of Corporate Legal Relations at Canal de Isabel II
- ◆ Consultant and Auditor at Helas Consultores SL
- ◆ Consultant and Auditor in Alaro Avant
- ◆ Lawyer in the area of New Technologies in Lorenzo Abogados
- ◆ Law Degree 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)
- ◆ Member: Spanish Privacy Professional Association (APEP) ISMS Forum

05

Structure and Content

Thanks to the Relearning method, based on the continuous reiteration of the content of this program, the graduate of this university degree will be able to acquire effective learning, without investing a large number of hours of study. In this way, you will achieve an advanced education on Technological Project Management in only 24 months. To achieve this goal, it has an advanced syllabus that covers design, time management, costs, quality, resources and all those elements that will allow you to successfully carry out any work in the sector.





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A unique academic option that provides you with innovative teaching material and a Relearning system that reduces study hours Enroll now"

Module 1. Introduction to technology project design and management and technology project integration management

- 1.1. Introduction to technology project management
 - 1.1.1. The role of the project manager
 - 1.1.2. Project definition
 - 1.1.3. Organizational structure
- 1.2. Project Management, Program Management and Portfolio Management
 - 1.2.1. Portfolios, Programs and Projects
 - 1.2.2. Strategic Management
- 1.3. Standards and best practices for the management of technology projects
 - 1.3.1. Prince 2
 - 1.3.2. PMP
 - 1.3.3. ISO 21500:2012
- 1.4. Organizational influences on the design and management of technology projects
 - 1.4.1. Environmental factors of a company
 - 1.4.2. Assets of an organization's processes
- 1.5. Technology project management processes
 - 1.5.1. Life cycle of technology projects
 - 1.5.2. Process Groups
 - 1.5.3. Dynamics of process groups
- 1.6. Development of the technology project constitution act
 - 1.6.1. Definition of the charter of incorporation of technology projects
 - 1.6.2. Tools and techniques
- 1.7. Development of the plan for the design and management of technological projects
 - 1.7.1. Definition of the plan for the design and management of technological projects
 - 1.7.2. Tools and Techniques
- 1.8. Knowledge management of technological projects
 - 1.8.1. Importance of knowledge management in technology projects
 - 1.8.2. Tools and techniques
- 1.9. Monitoring the work of technology projects
 - 1.9.1. Work monitoring and control
 - 1.9.2. Follow-up reports on technology projects
 - 1.9.3. Tools and techniques

- 1.10. Integrated control of changes in technological projects
 - 1.10.1. Objectives and benefits of project change control
 - 1.10.2. CCB (Change Control Board)
 - 1.10.3. Tools and techniques
- 1.11. Delivery and closure of technology projects
 - 1.11.1. Objectives and benefits of project closure
 - 1.11.2. Tools and techniques

Module 2. Scope management of technology projects

- 2.1. Introduction to Scope Management
 - 2.1.1. Scope of the Project
 - 2.1.2. Product Scope
- 2.2. Fundamentals of Scope Management
 - 2.2.1. Basic Concepts
 - 2.2.2. Scope Baseline
- 2.3. Benefits of Scope Management
 - 2.3.1. Stakeholder Expectation Management
 - 2.3.2. Scoop Creep y Gold Plating
- 2.4. Considerations for Adaptive Environments
 - 2.4.1. Types of Adaptive Projects
 - 2.4.2. Scope Definition in Adaptive Projects
- 2.5. Scope Management Planning
 - 2.5.1. Scope Management Plan
 - 2.5.2. Requirements Management Plan
 - 2.5.3. Tools and techniques
- 2.6. Gathering Requirements
 - 2.6.1. Gathering and Negotiation of Requirements
 - 2.6.2. Tools and techniques
- 2.7. Scope Definition
 - 2.7.1. Project Scope Statement
 - 2.7.2. Tools and techniques



- 2.8. Creation of the Work Breakdown Structure (WBS)
 - 2.8.1. Work Breakdown Structure (WBS)
 - 2.8.2. Types of EDT
 - 2.8.3. Rolling Wave
 - 2.8.4. Tools and techniques
- 2.9. Scope Validation
 - 2.9.1. Quality vs. Validation
 - 2.9.2. Tools and techniques
- 2.10. Scope Control
 - 2.10.1. Project Management Data and Information
 - 2.10.2. Types of Work Performance Reports
 - 2.10.3. Tools and techniques

Module 3. Time management of technology projects

- 3.1. Estimated Duration of Project Tasks
 - 3.1.1. Three-Point Estimation
 - 3.1.1.1. Most Likely
 - 3.1.1.2. Best-Case
 - 3.1.1.3. Worst-Case
 - 3.1.2. Analogous Estimate
 - 3.1.3. Parametric Estimation
 - 3.1.4. Bottom-up Estimates
 - 3.1.5. Decision Making
 - 3.1.6. Expert Judgment
- 3.2. Definition of Activities and Breakdown of Project Work
 - 3.2.1. Decomposition
 - 3.2.2. Define Activities
 - 3.2.3. Breakdown of Project Work
 - 3.2.4. Activity Attributes
 - 3.2.5. List of Milestones

- 3.3. Sequencing of Activities
 - 3.3.1. List of Activities
 - 3.3.2. Attributes of the Activities
 - 3.3.3. Method of Diagramming Provenance
 - 3.3.4. Determination and Integration of Units
 - 3.3.5. Advances and Delays
 - 3.3.6. Network Diagram of the Project Schedule
- 3.4. Estimation of Activity Resources
 - 3.4.1. Register of Assumptions
 - 3.4.2. List of activities
 - 3.4.3. Attributes of the Activities
 - 3.4.4. Register of Assumptions
 - 3.4.5. Lessons Learned Register
 - 3.4.6. Project Team Assignments
 - 3.4.7. Resource Breakdown Structure
- 3.5. Estimated Duration of Activities
 - 3.5.1. Law of Diminishing Returns
 - 3.5.2. Number of Resources
 - 3.5.3. Technological Advances
 - 3.5.4. Staff Motivation
 - 3.5.5. Project Documentation
- 3.6. Schedule Development
 - 3.6.1. Schedule Network Analysis
 - 3.6.2. Critical Path Method
 - 3.6.3. Resource Management
 - 3.6.3.1. Resource Leveling
 - 3.6.3.2. Stabilization of Resources
 - 3.6.4. Advances and Delays
 - 3.6.5. Schedule Compression
 - 3.6.5.1. Intensification
 - 3.6.5.2. Fast Execution
 - 3.6.6. Baseline Schedule
 - 3.6.7. Project Timeline
 - 3.6.8. Schedule Data
 - 3.6.9. Project Schedules
- 3.7. Types of Relationships and Types of Dependencies between all Project Activities
 - 3.7.1. Mandatory Dependencies
 - 3.7.2. Discretionary Units
 - 3.7.2.1. Preferred Logic
 - 3.7.2.2. Preferential Logic
 - 3.7.2.3. Soft Logic
 - 3.7.3. External Units
 - 3.7.4. Internal Units
- 3.8. Time Management Software in Technology Projects
 - 3.8.1. Analysis of Different Software
 - 3.8.2. Types of Software
 - 3.8.3. Functionalities and Coverage
 - 3.8.4. Uses and Advantages
- 3.9. Schedule Control
 - 3.9.1. Job Performance Information
 - 3.9.2. Schedule Forecasts
 - 3.9.3. Change Requests
 - 3.9.4. Update to the Time Management Plan
 - 3.9.5. Project Document Updates
- 3.10. Time Recalculation
 - 3.10.1. Critical Path
 - 3.10.2. Calculation of Minimum and Maximum Times
 - 3.10.3. Project Clearances
 - 3.10.3.1. What Is It?
 - 3.10.3.2. How to use it?
 - 3.10.4. Total Slack
 - 3.10.5. Free Slack

Module 4. Cost management of technology projects

- 4.1. What Is the Cost Management Plan?
 - 4.1.1. Planning Tools and Techniques
 - 4.1.2. Cost Planning Results
- 4.2. Estimate Costs. Types of Estimates. Reserve Analysis
 - 4.2.1. Useful Information for Cost Estimation
 - 4.2.2. Tools and Techniques for Cost Estimation
 - 4.2.3. Results of Cost Budget Preparation
- 4.3. Types of Project Costs
 - 4.3.1. Direct and Indirect Costs
 - 4.3.2. Fixed and Variable Costs
- 4.4. Project Evaluation and Selection
 - 4.4.1. Financial Dimensions of a Project
 - 4.4.2. VAN
 - 4.4.3. TIR & RRN
 - 4.4.4. Payback period
- 4.5. Setting the Budget
 - 4.5.1. Useful Information for the Preparation of the Project Budget
 - 4.5.2. Tools and Techniques for Cost Budget Preparation
 - 4.5.3. Results of Project Budget Preparation
- 4.6. Cost Projections
 - 4.6.1. Cost Management Data and Information
 - 4.6.2. Types of Cost Performance Reports
- 4.7. Earned Value Management Technique (EVM)
 - 4.7.1. Base Variables and Status Variables
 - 4.7.2. Forecasts
 - 4.7.3. Emerging Techniques and Practices
- 4.8. Project Cash Flow
 - 4.8.1. Types of cash flows
 - 4.8.2. Estimation of Net Cash Flows Associated with a Project
 - 4.8.3. Discounted Cash Flows
 - 4.8.4. Application of Risk to Cash Flows

- 4.9. Cost Control
 - 4.9.1. Objectives and Benefits of Cost Control
 - 4.9.2. Tools and techniques

Module 5. Quality management of technological projects

- 5.1. Importance of Quality Management in Projects
 - 5.1.2. Key Concepts
 - 5.1.3. Difference between Quality and Grade
 - 5.1.4. Precision
 - 5.1.5. Accuracy
 - 5.1.6. Metrics
- 5.2. Quality Theorists
 - 5.2.1. Edwards Deming
 - 5.2.1.1. Shewart-Deming Cycle (Plan Do -Check-Act)
 - 5.2.2. Continuing Improvement
 - 5.2.3. Joseph Juran. Pareto Principle
 - 5.2.3.1. Fitness-for-purpose" theory
 - 5.2.4. "Total Quality Management" Theory
 - 5.2.5. Kaoru Ishikawa (Herringbone)
 - 5.2.6. Philip Crosby (Cost of Low Quality)
- 5.3. Regulations: ISO 21500
 - 5.3.1. Introduction
 - 5.3.2. Background and History
 - 5.3.3. Objectives and characteristics
 - 5.3.4. Process group - subject group
 - 5.3.5. ISO 21500 vs. PMBOK
 - 5.3.6. Future of the Standard
- 5.4. Emerging Trends and Practices in Quality Management
 - 5.4.1. Policy Compliance and Auditing
 - 5.4.2. Standards and Compliance
 - 5.4.3. Continuing Improvement
 - 5.4.4. Stakeholder Engagement
 - 5.4.5. Recurring Retrospectives
 - 5.4.6. Subsequent Retrospectives

- 5.5. Quality Management Planning
 - 5.5.1. Cost-benefit Analysis
 - 5.5.2. Multi-criteria Decision Analysis
 - 5.5.3. Test Planning and Inspection
 - 5.5.4. Flow Diagrams
 - 5.5.5. Logical Data Model
 - 5.5.6. Matrix Diagram
 - 5.5.7. Interrelationship Digraphs
- 5.6. Quality Compliance and Noncompliance Costs
 - 5.6.1. Compliance Costs
 - 5.6.2. Non-compliance or Non-conformance Costs
 - 5.6.3. Prevention Costs
 - 5.6.4. Valuation Costs
 - 5.6.5. Internal Failures
 - 5.6.6. External Failures
 - 5.6.7. Marginal Cost of Quality
 - 5.6.8. Optimum Quality
- 5.7. Quality Management
 - 5.7.1. Checklists
 - 5.7.2. Analysis of Alternatives
 - 5.7.3. Document Analysis
 - 5.7.4. Process Analysis
 - 5.7.5. Root Cause Analysis
 - 5.7.6. Cause- and-effect Diagrams
 - 5.7.7. Histograms
 - 5.7.8. Scatter Plots
 - 5.7.9. Design for X
 - 5.7.10. Quality Improvement Methods

- 5.8. Quality Audits
 - 5.8.1. What is an Internal Quality Audit
 - 5.8.2. Different Types of Audits
 - 5.8.3. Objectives of an Internal Audit
 - 5.8.4. Benefits of Internal Audits
 - 5.8.5. Actors Involved in Internal Auditing
 - 5.8.6. Internal Audit Procedure
- 5.9. Quality Control
 - 5.9.1. Verification Sheets
 - 5.9.2. Statistical Sampling
 - 5.9.3. Questionnaires and Surveys
 - 5.9.4. Performance Reviews
 - 5.9.5. Inspection
 - 5.9.6. Product Testing/Evaluation
 - 5.9.7. Retrospectives and Lessons Learned

Module 6. Management of technology project resources

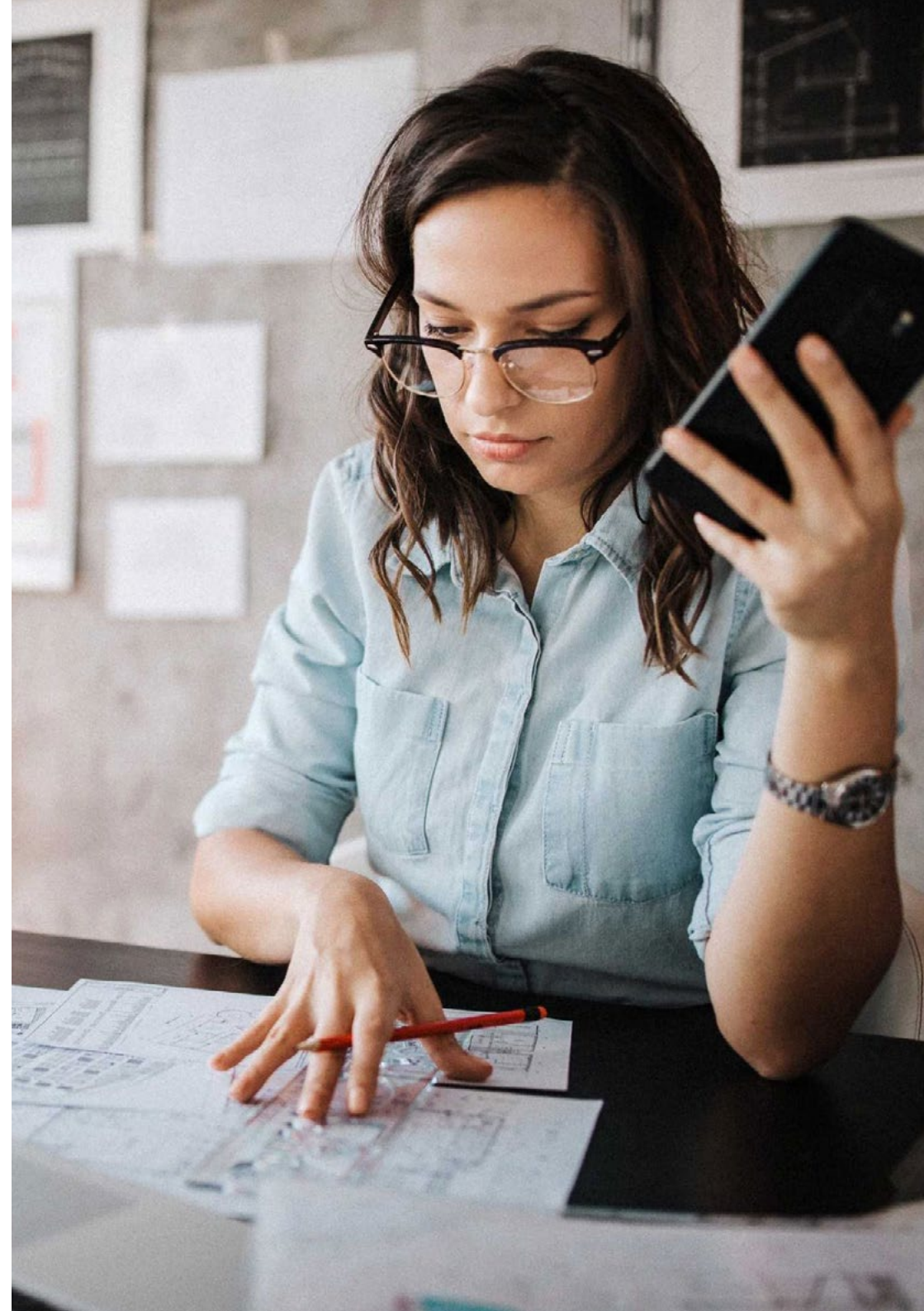
- 6.1. Responsibilities and Role of Human Resources in Projects:
 - 6.1.1. Project Manager
 - 6.1.2. Sponsor
 - 6.1.3. Functional Director
 - 6.1.4. Program Manager
 - 6.1.5. Portfolio Manager
 - 6.1.6. Team members
- 6.2. Management of Technological Resources
 - 6.2.1. What are Technological Resources?
 - 6.2.2. Optimization
 - 6.2.3. Valorization
 - 6.2.4. Protection

- 6.3. Human Resources Management Planning and Estimation of Resources for Activities
 - 6.3.1. Resources Management Plan
 - 6.3.1.1. Data Representation
 - 6.3.1.2. Organizational Theory
 - 6.3.2. Resource Requirements
 - 6.3.3. Basis of Estimates
 - 6.3.4. Resource Breakdown Structure
 - 6.3.5. Resource Document Updates
- 6.4. Different Powers of the Project Manager
 - 6.4.1. Power and Influence
 - 6.4.2. Reward Power
 - 6.4.3. Power of Punishment
 - 6.4.4. Expert Power
 - 6.4.5. Power of Reference
 - 6.4.6. Formal Power of Attorney
 - 6.4.7. Practical Exercises on How to use the Various Powers of the Project Manager
- 6.5. Acquisition of the Right Project Equipment for our Project
 - 6.5.1. What is Equipment Acquisition?
 - 6.5.2. Means of Equipment Acquisition
 - 6.5.2.1. Hiring
 - 6.5.2.2. Outsourcing
 - 6.5.3. Decision Making
 - 6.5.3.1. Availability
 - 6.5.3.2. Costs
 - 6.5.3.3. Experience
 - 6.5.3.4. Skills
 - 6.5.3.5. Knowledge
 - 6.5.3.6. Capabilities
 - 6.5.3.7. Attitudes
 - 6.5.3.8. International Factors
 - 6.5.4. Pre-assignment
 - 6.5.5. Virtual Teams
- 6.6. Development of Interpersonal Skills (Soft Skills):
 - 6.6.1. Leadership
 - 6.6.2. Motivation
 - 6.6.3. Communication
 - 6.6.4. Influence
 - 6.6.5. Group Facilitation
 - 6.6.6. Creativity
 - 6.6.7. Emotional Intelligence
 - 6.6.8. Decision Making
- 6.7. Project Team Development
 - 6.7.1. Recognition and Rewards
 - 6.7.1.1. Preconditions to be Met for its Application
 - 6.7.1.2. Create a Recognition and Reward System
 - 6.7.2. Training
 - 6.7.3. Coubication (tight matrix)
 - 6.7.4. Communication technology
 - 6.7.5. Team Building Activities
- 6.8. Project team management. Performance Evaluations, Management of Project Teams
 - 6.8.1. Planning
 - 6.8.2. Types of Assessments
 - 6.8.2.1. Personal Evaluations 360° Evaluations
 - 6.8.2.2. Equipment Evaluations
 - 6.8.3. Variables Definition
 - 6.8.4. Design of the Performance Evaluation System
 - 6.8.5. Implementation and Training of Evaluators
- 6.9. Conflict Management and Resolution Techniques
 - 6.9.1. What are Project Conflicts? Types
 - 6.9.2. Cooperate and Resolve Problems (Collaborate/Problem Solve)
 - 6.9.3. Compromise/Reconcile
 - 6.9.4. Withdraw/Avoid
 - 6.9.5. Smooth/Accommodate
 - 6.9.6. Force/Direct (Force/Direct)
 - 6.9.7. Practical Exercises to Know When to use Each Conflict Resolution Technique

- 6.10. Emerging Trends and Practices in the Management of Technology Project Resources
 - 6.10.1. Methods for Resource Management
 - 6.10.2. Emotional Intelligence (EI)
 - 6.10.3. Self-organized Teams
 - 6.10.4. Virtual teams/distributed teams
 - 6.10.5. Considerations for Adaptation
 - 6.10.6. Considerations for Agile/Adaptive Environments

Module 7. Communications and stakeholder management for technology projects

- 7.1. Communications Management Planning
 - 7.1.1. Why Is a Communications Management Plan Important?
 - 7.1.2. Introduction to Communications Management
 - 7.1.3. Communications Analysis and Requirements
 - 7.1.4. Dimensions of Communications
 - 7.1.5. Techniques and Tools
- 7.2. Communication Skills
 - 7.2.1. Conscious Emission
 - 7.2.2. Active Listening
 - 7.2.3. Empathy
 - 7.2.4. Avoid Bad Gestures
 - 7.2.5. Reading and Writing
 - 7.2.6. Respect
 - 7.2.7. Persuasion
 - 7.2.8. Credibility
- 7.3. Effective, Efficient Communication and Types of Communication
 - 7.3.1. Definition
 - 7.3.2. Effective Communication
 - 7.3.3. Efficient Communication
 - 7.3.4. Formal Communication
 - 7.3.5. Informal Communication
 - 7.3.6. Written Communication
 - 7.3.7. Verbal Communication
 - 7.3.8. Practical Exercises on the use of Communication Types in a Project



- 7.4. Communications Management and Control
 - 7.4.1. Project Communications Management
 - 7.4.2. Communication Models
 - 7.4.3. Communication Methods
 - 7.4.4. Project Communications Channels
- 7.5. Emerging Trends and Practices in the Field of Communication
 - 7.5.1. Evaluation of Communication Styles
 - 7.5.2. Political Awareness
 - 7.5.3. Cultural Awareness
 - 7.5.4. Communication Technology
- 7.6. Stakeholder Identification and Analysis
 - 7.6.1. Why is it Important to Manage Stakeholders?
 - 7.6.2. Stakeholder Analysis and Registration
 - 7.6.3. Stakeholder Interests and Concerns
 - 7.6.4. Considerations for Agile and Adaptive Environments
- 7.7. Stakeholder Management Planning
 - 7.7.1. Appropriate Management Strategies
 - 7.7.2. Tools and techniques
- 7.8. Stakeholder Engagement Management. Management Strategy
 - 7.8.1. Methods for Increasing Support and Minimizing Resistance
 - 7.8.2. Tools and techniques
- 7.9. Monitoring of Stakeholder Involvement
 - 7.9.1. Stakeholder Performance Report
 - 7.9.2. Tools and techniques

Module 8. Technology project risk management

- 8.1. Introduction to Risk Management
 - 8.1.1. Definition of Risks
 - 8.1.1.1. Threats
 - 8.1.1.2. Opportunities
 - 8.1.2. Types of Risks
- 8.2. Basic Concepts
 - 8.2.1. Severity
 - 8.2.2. Attitudes Towards Risk
 - 8.2.3. Individual Risk vs. General Risk
 - 8.2.4. Risk Categories
- 8.3. Risk Management: Benefits
- 8.4. Trends in Risk Management
 - 8.4.1. Non-Event Risks
 - 8.4.2. Project Resilience
 - 8.4.3. Risks in Agile and Adaptive Environments
- 8.5. Risk Management Planning
 - 8.5.1. Develop the Risk Management Plan
 - 8.5.2. Tools and techniques
- 8.6. Identification of Risks
 - 8.6.1. The Project Risk Register
 - 8.6.2. Tools and techniques
- 8.7. Perform Qualitative Risk Analysis
 - 8.7.1. Qualitative Risk Analysis
 - 8.7.1.1. Definición
 - 8.7.1.2. Representation
 - 8.7.2. Tools and techniques
- 8.8. Perform Quantitative Risk Analysis
 - 8.8.1. Quantitative Risk Analysis: Definition and Representation
 - 8.8.2. Tools and techniques
 - 8.8.3. Modelling and Simulation
 - 8.8.4. Sensitivity Analysis
 - 8.8.5. Contingency Reserve Calculation

- 8.9. Risk Response Planning and Implementation
 - 8.9.1. Develop Risk Response Plan
 - 8.9.2. Types of Threat Strategies
 - 8.9.3. Types of Strategies for Opportunities
 - 8.9.4. Reserves Management
 - 8.9.5. Tools and techniques
 - 8.9.6. Implementation of Risk Response
- 8.10. Risk Monitoring
 - 8.10.1. Risk Monitoring Concepts
 - 8.10.2. Tools and techniques

Module 9. Technology project procurement management

- 9.1. Introduction to Acquisition Management
 - 9.1.1. Definition of Contract
 - 9.1.2. Legal Framework acquisitions
- 9.2. Basic Concepts
 - 9.2.1. Definition of Contract
 - 9.2.2. The Project Manager and the Contract
 - 9.2.3. Main Activities
 - 9.2.4. Centralized and Decentralized Contracting
- 9.3. Procurement Management: Benefits
 - 9.3.1. Definition of the Acquisition Strategy
 - 9.3.2. Types of Strategies
- 9.4. Acquisitions in Adaptive Environments
- 9.5. Types of Contracts
 - 9.5.1. Fixed Price Contracts
 - 9.5.2. Reimbursable Cost Contracts
 - 9.5.3. Time and Materials Contracts
- 9.6. Procurement Documentation
 - 9.6.1. Types of Documents in the Context of an Acquisition
 - 9.6.2. Document Flows in Procurement Management
- 9.7. Negotiation with Suppliers
 - 9.7.1. Supplier Negotiation Objectives
 - 9.7.2. Negotiation Techniques with Suppliers

- 9.8. Procurement Management Planning
 - 9.8.1. Procurement Management Plan
 - 9.8.2. Tools and techniques
- 9.9. Procurement
 - 9.9.1. Search, Selection and Evaluation of Bids
 - 9.9.2. Tools and techniques
 - 9.9.3. Bid Weighting Matrix
- 9.10. Procurement Monitoring and Control
 - 9.10.1. Procurement Monitoring and Control Points by Contract Type
 - 9.10.2. Tools and techniques

Module 10. PMP® or CAPM® certification and code of ethics. Emerging trends and practices in technology project management and governance

- 10.1. What is PMP®, CAPM® and PMI®?
 - 10.1.1. What is PMP®,
 - 10.1.2. CAPM®
 - 10.1.3. PMI®
 - 10.1.4. PMBOK
- 10.2. Advantages and Benefits of Obtaining PMP® and CAPM® Certification
 - 10.2.1. Techniques and Tricks to Pass the PMP® and CAPM® Certification Exams on the First Attempt
 - 10.2.2. pmi-isms
- 10.3. Professional Experience Report to PMI® (Project Management Technology Institute)
 - 10.3.1. Becoming a PMI® Member
 - 10.3.2. PMP® and CAPM® Certification Exam Entry Requirements
 - 10.3.3. Analysis of the Student's Professional Experience
 - 10.3.4. Student Work Experience Report Help Template
 - 10.3.5. PMI® Software Experience Report

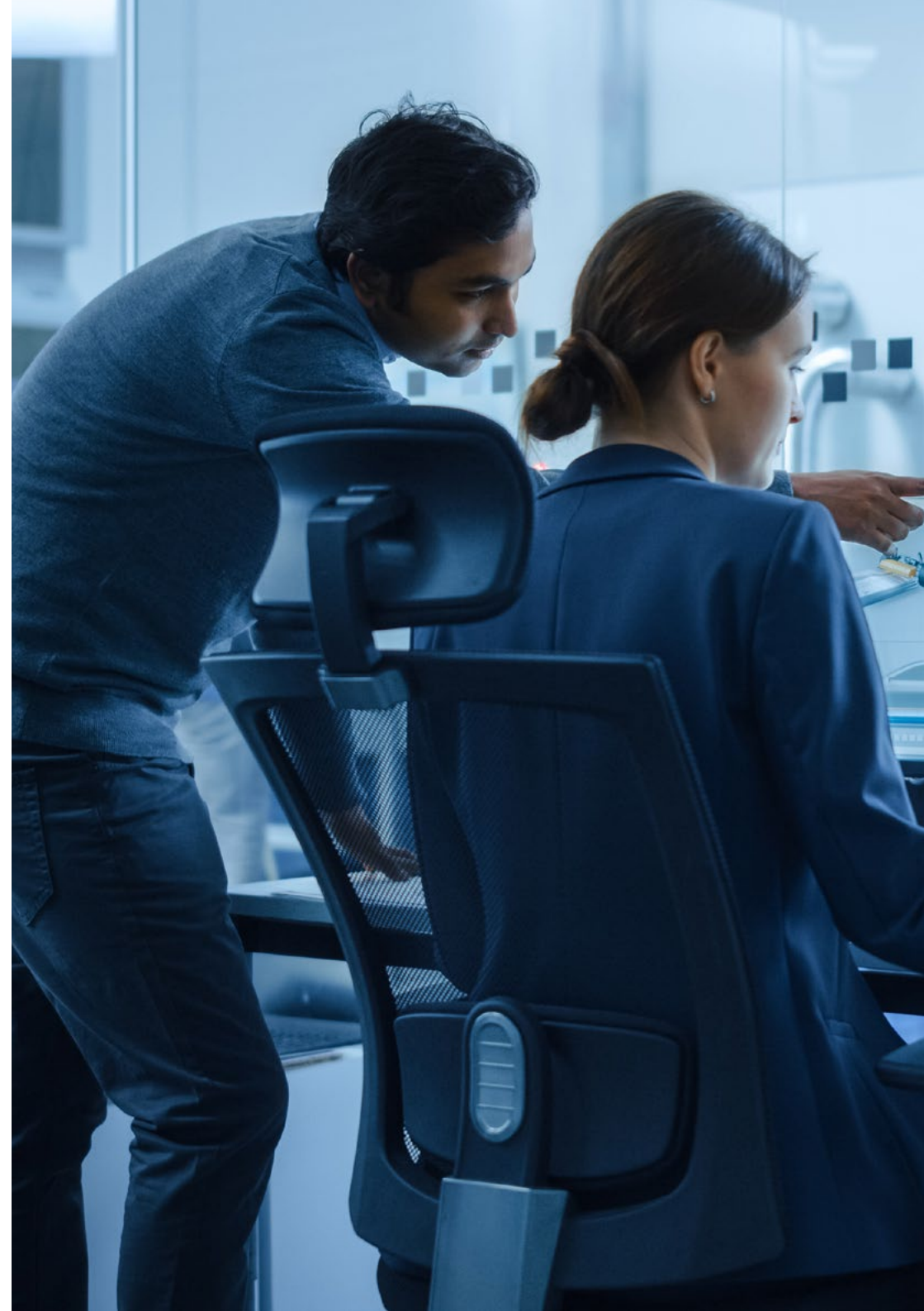
- 10.4. PMP® or CAPM® Certification Examination
 - 10.4.1. What is the PMP® or CAPM® Certification Exam Like?
 - 10.4.2. Number of Scoring and Non-scoring Questions
 - 10.4.3. Duration of the Exam
 - 10.4.4. Passing Threshold
 - 10.4.5. Number of Questions per Process Group
 - 10.4.6. Qualification Methodology
- 10.5. Agile Methodologies
 - 10.5.1. AGILE
 - 10.5.2. Scrum
 - 10.5.3. Kanban
 - 10.5.4. LEAN
 - 10.5.5. Comparison with PMI® Certifications
- 10.6. Software Development in Agile Methodologies
 - 10.6.1. Analysis of the Different Software on the Market
 - 10.6.2. Advantages and Benefits
- 10.7. Advantages and Limitations of Implementing Agile Methodologies in your technology projects
 - 10.7.1. Advantages
 - 10.7.2. Limitations
 - 10.7.3. Agile methodologies vs. traditional tools
- 10.8. Code of Ethics in the Management of your Projects
 - 10.8.1. Responsibility
 - 10.8.2. Respect
 - 10.8.3. Impartiality
 - 10.8.4. Honesty
- 11.3. Process Management according to the Process Management Institute
 - 11.3.1. Process Groups and Knowledge Areas
 - 11.3.2. Process Matrix
- 11.4. Agile Methodologies for Project Management
 - 11.4.1. Application Motivation
 - 11.4.2. Agile Values and Principles of the Agile Manifesto
 - 11.4.3. Application Scenarios
- 11.5. SCRUM for Agile Project Management: Framework Description
 - 11.5.1. Agile Management Framework
 - 11.5.2. Scrum Pillars and Values
- 11.6. SCRUM for Agile Project Management: Model Implementation
 - 11.6.1. Framework Implementation
 - 11.6.2. People, Roles and Responsibilities on Scrum
 - 11.6.3. Sprint Planning, Daily Scrum, Sprint Review, Sprint Retrospective and Sprint Refinement
- 11.7. SCRUM for Agile Project Management
 - 11.7.1. Backlog Product Sprint Backlog and Incremental Backlog
 - 11.7.2. Scrum Team Agreements
 - 11.7.3. Performance Assessment
- 11.8. KANBAN for Agile Project Management
 - 11.8.1. The Model
 - 11.8.2. Kanban Method, Elements and Benefits
 - 11.8.3. Typical Usage Scenarios
- 11.9. KANBAN for Agile Project Management: Model Implementation
 - 11.9.1. Fundame
 - 11.9.2. Application
 - 11.9.3. Performance Assessment
- 11.10. Project Direction Model Selection
 - 11.10.1. Criteria for Selecting a Management Model Type
 - 11.10.2. Traditional Methods vs. Agile Methods
 - 11.10.3. Conclusions

Module 11. Agile Technology Project Direction and Management

- 11.1. Project Management
 - 11.1.1. Project Management
 - 11.1.2. Phases of a Project
- 11.2. Project Direction According to the Project Management Institute
 - 11.2.1. PMI and PMBOK
 - 11.2.2. Project, Program and Project Portfolio
 - 11.2.3. Evolution and assets of the processes of organizations working with projects

Module 12. Requirements Management and Process Analysis in Software Development Projects

- 12.1. Systems Analysis
 - 12.1.1. Systems Analyst Functions
 - 12.1.2. Software Development Cycle: SDLC and OO AGILE
 - 12.1.3. SDLC, OO and Agile
- 12.2. Importance of Systems Analysis and Design
 - 12.2.1. Information Systems
 - 12.2.2. Integrating IT Technologies: HW and Software
 - 12.2.3. Methodology Selection
- 12.3. Software Development Life Cycle
 - 12.3.1. Campaigns and Types
 - 12.3.2. Redemption and Drive
 - 12.3.3. Types of Strategies
 - 12.3.4. Digital Marketing Plan
- 12.4. Systems Model and Design: Integration
 - 12.4.1. Dependencies with Other Operating Systems in the Organization
 - 12.4.2. Integration Using Project Management Methodologies such as PMBOOK
 - 12.4.3. Integration with Agile Methodologies
- 12.5. Requirements
 - 12.5.1. Interactive Methods: Interviews, JAD and Questionnaires
 - 12.5.2. Non-Interactive Methods: Observation and Revision Documents
 - 12.5.3. Sampling Techniques: Sampling
- 12.6. Processes Analysis: DFDs
 - 12.6.1. Multilevel DFD Development
 - 12.6.2. DFD Types: Physical and Logical, Based on Events
 - 12.6.3. DFD Partitioning
- 12.7. Processes Analysis: Data Dictionary
 - 12.7.1. Creating Data Dictionaries Based on Previous DAFD
 - 12.7.2. Data Dictionary Nomenclature
 - 12.7.3. XML Creation for Data Exchange with Other Systems





- 12.8. Processes Analysis: Processes Specifications
 - 12.8.1. Structured and Semi-structured Decisions
 - 12.8.2. If-The-Else
 - 12.8.3. Decision Tables and Trees
- 12.9. Importance of Design
 - 12.9.1. Output Design
 - 12.9.2. Input Design
 - 12.9.3. Validating Design
- 12.10. Database Design
 - 12.10.1. Normalization of Data
 - 12.10.2. E-R Diagrams: One-to-many and Many-to-many Relationships
 - 12.10.3. Destandardization

Module 13. Business Management: Technologies for Resource and Customer Management

- 13.1. Enterprise Information Management and Storage Systems
 - 13.1.1. Enterprise Resource Planning
 - 13.1.2. Customer Relationship Management
 - 13.1.3. Enterprise Resource Planning vs. Customer Relationship Management
 - 13.1.4. Enterprise Resource Planning and Customer Relationship Management in Business
- 13.2. Enterprise Resource Planning
 - 13.2.1. Benefits of Enterprise Resource Planning in Companies
 - 13.2.2. Implantation and Management
 - 13.2.3. Enterprise Resource Planning Day-to-day
- 13.3. Enterprise Resource Planning and Management
 - 13.3.1. ERP Modules
 - 13.3.2. Enterprise Resource Planning System Types
 - 13.3.3. Tools Available on the Market
- 13.4. Customer Relationship Management
 - 13.4.1. Implementing Customer Relationship Management in Companies
 - 13.4.2. Information System Design
 - 13.4.3. Customer Relationship Management for Processes Implementation

- 13.5. Customer Relationship Management for Project Design
 - 13.5.1. Current Situation
 - 13.5.2. Sales or Loyalty
 - 13.5.3. Customer Loyalty Profitability
- 13.6. Customer Relationship Management. Working with Information
 - 13.6.1. Project Marketing and Management
 - 13.6.2. Success Factors
 - 13.6.3. Strategies
- 13.7. Customer Relationship Management. Communication Tools
 - 13.7.1. Communication
 - 13.7.2. The Information
 - 13.7.3. Active Listening
 - 13.7.4. Investment Strategies in Information Systems
- 13.8. Customer Relationship Management. Dissatisfied Customer Recovery
 - 13.8.1. Detecting Errors in Time
 - 13.8.2. Correcting and Remediating Errors
 - 13.8.3. Customer Recovery and Continuous Improvement Process Design
- 13.9. IT Projects
 - 13.9.1. Objectives
 - 13.9.2. Enterprise Resource Planning and Customer Relationship Management for Attracting Customers
 - 13.9.3. Projects Design
 - 13.9.4. Assessing and Recording Results
- 13.10. Computer Project Development
 - 13.10.1. Frequent Errors
 - 13.10.2. Methodology
 - 13.10.3. Segmentation and Processes
 - 13.10.4. Education
 - 13.10.5. Actions Design Applied to Customer Relationship Management and Enterprise Resource Planning

Module 14. IT Project Management and Control through Business Intelligence

- 14.1. Business Intelligence
 - 14.1.1. Business Intelligence
 - 14.1.2. Data Management
 - 14.1.3. Data Life Cycle
 - 14.1.4. Architecture
 - 14.1.5. Applications
- 14.2. IT Project Management Using Analytical Techniques
 - 14.2.1. Business Intelligence Selection
 - 14.2.2. Advantages of Using Business Intelligence in Projects
 - 14.2.3. Examples and Applications
- 14.3. Harvesting and Storage
 - 14.3.1. Business Models and Data Models
 - 14.3.2. Types of Storage
 - 14.3.3. Storing Big Data in the Cloud
- 14.4. Massive Data and Information Processing
 - 14.4.1. Types of Data Processing
 - 14.4.2. Techniques to Simplify Massive Processing
 - 14.4.3. Cloud Processing
- 14.5. Analytical Techniques
 - 14.5.1. Analytical Techniques
 - 14.5.2. Predictive Analyses
 - 14.5.3. Pattern Analysis and Recommendation
 - 14.5.4. Scalable Machine Learning
- 14.6. Visualization for Decision Making
 - 14.6.1. Visualization and Data Analysis
 - 14.6.2. Data Science
 - 14.6.3. Data Analysis Visualization
 - 14.6.4. Reports Design
- 14.7. Business Information Consumption
 - 14.7.1. Control Panel
 - 14.7.2. KPI Design and Mining
 - 14.7.3. Geographic Information

- 14.8. Security and Governance
 - 14.8.1. Security/Safety
 - 14.8.2. Governance
- 14.9. Real Applications to IT Projects
 - 14.9.1. From Harvesting to Processing
 - 14.9.2. From Analysis to Visualization
- 14.10. Project Management
 - 14.10.1. Project
 - 14.10.2. Requirements and Objectives
 - 14.10.3. Start-up and Implementation

Module 15. IT Project Strategic Monitoring and Control

- 15.1. Data and Information in Decision Making and Project Management
 - 15.1.1. Business Intelligence
 - 15.1.2. Business Intelligence Concept Evolution
 - 15.1.3. Data Life Cycle
- 15.2. Information Analysis Techniques
 - 15.2.1. Descriptive Analytics
 - 15.2.2. Prescriptive Analytics
 - 15.2.3. Predictive Analytics
 - 15.2.4. Pattern Analysis and Recommendation
 - 15.2.5. Benefits of IT Projects Analysis
- 15.3. Types of Data
 - 15.3.1. Structured Data
 - 15.3.2. Semi-Structured Data
 - 15.3.3. Unstructured Data
- 15.4. Storage and Management
 - 15.4.1. Data Lake, Data Warehouse and Data Mart
 - 15.4.2. Stages in Data Management: Mining, Processing and Loading
 - 15.4.3. ETL and ELT Paradigm
- 15.5. Data Management for Project Implementation
 - 15.5.1. Data Use in Project Design
 - 15.5.2. Decision Making
 - 15.5.3. Benefits

- 15.6. Business Intelligence Solutions: Power BI
 - 15.6.1. Ecosystem
 - 15.6.2. Potential Strengths and Weaknesses
- 15.7. Business Intelligence Solutions: Tableau
 - 15.7.1. Ecosystem
 - 15.7.2. Strengths and Weaknesses
- 15.8. Business Intelligence Solutions: Qlik
 - 15.8.1. Ecosystem
 - 15.8.2. Potential Strengths and Weaknesses
- 15.9. Business Intelligence Solutions: Prometheus
 - 15.9.1. Ecosystem
 - 15.9.2. Potential Strengths and Weaknesses
- 15.10. Future of Business Intelligence
 - 15.10.1. Cloud Applications
 - 15.10.2. Self-consumption Business Intelligence
 - 15.10.3. Integration with Data Science: Value Creation

Module 16. Digital Analytics for Decision-Making in Technology Projects

- 16.1. Digital Analytics
 - 16.1.1. Digital Analytics
 - 16.1.2. Modus Operandi
- 16.2. Google Analytics: Analysis Tool
 - 16.2.1. Google Analytics
 - 16.2.2. Quantifying and Qualifying: Metrics and Dimensions
 - 16.2.3. Analysis Objectives
- 16.3. Metrics
 - 16.3.1. Basic Metrics
 - 16.3.2. KPI (Key Performance Indicators) or Advanced Metrics
 - 16.3.3. Objective: Conversion
- 16.4. Dimensions
 - 16.4.1. Campaign/Keyword
 - 16.4.2. Source/Media
 - 16.4.3. Contents

- 16.5. Google Analytics
 - 16.5.1. Tool Set-up and Configuration
 - 16.5.2. Current Versions: UA/GA4
 - 16.5.3. Conversion Objectives: Conversion Funnels
- 16.6. Google Analytics Structure: Work Areas
 - 16.6.1. Accounts
 - 16.6.2. Properties
 - 16.6.3. Views
- 16.7. Google Analytics Reports
 - 16.7.1. In Real Time
 - 16.7.2. Audience
 - 16.7.3. Acquisition
 - 16.7.4. Behaviour
 - 16.7.5. Conversions
- 16.8. Google Analytics Advanced Reports
 - 16.8.1. Personalised Reports
 - 16.8.2. Panels
 - 16.8.3. APIs
- 16.9. Filtering
 - 16.9.1. Filtering and Segmentation: Usability
 - 16.9.2. Predefined Segments and Personalized Segments
 - 16.9.3. Remarketing Lists
- 16.10. Digital Analytics Plan
 - 16.10.1. Measurement
 - 16.10.2. Implementation in the Technological Environment
 - 16.10.3. Conclusions





Module 17. Improving IT Projects and Businesses Using Analytical Techniques

- 17.1. Company Data Analytics
 - 17.1.1. Company Data Analytics
 - 17.1.2. Value
 - 17.1.3. Project Management According to Value
- 17.2. Digital Marketing
 - 17.2.1. Digital Marketing
 - 17.2.2. Benefits of Digital Marketing
- 17.3. Digital Marketing: Preparation
 - 17.3.1. Campaigns
 - 17.3.2. Implementation and Measurement
 - 17.3.3. Digital Strategy Variants
 - 17.3.4. Planning
- 17.4. Digital Marketing: Implementation
 - 17.4.1. Applications
 - 17.4.2. Integration in Web Environments
- 17.5. Life Cycle
 - 17.5.1. Customer Journey vs. Campaigns
 - 17.5.2. Measurement
- 17.6. Data management
 - 17.6.1. Datawarehouse and Datalab
 - 17.6.2. Applications for the Generation of Campaign Bases
 - 17.6.3. Drive Options
- 17.7. Campaign Exclusions
 - 17.7.1. Types
 - 17.7.2. GDPR and Robinson
 - 17.7.3. Data Anonymization
- 17.8. Control Panels
 - 17.8.1. Audience
 - 17.8.2. Story-Telling
 - 17.8.3. Applications

- 17.9. Value Conclusions in Data Analytics:
 - 17.9.1. Customer Global Vision
 - 17.9.2. Analysis Strategy and Types
 - 17.9.3. Applications
- 17.10. Application in Business Scenarios
 - 17.10.1. Wallet Clustering
 - 17.10.2. Predictive Risk Models
 - 17.10.3. Wallet Customers Characterization
 - 17.10.4. Image Processing
 - 17.10.5. Bid Proposal Forms

Module 18. Quality in Software Project Management and Implementation

- 18.1. Software Quality
 - 18.1.1. Methodologies and Standards
 - 18.1.2. Software Quality Reports: Standish Group CHAOS Report
 - 18.1.3. Software quality certifications: ISO and AENOR
- 18.2. Secure Codification
 - 18.2.1. Codification: Reasons and Types of Codes
 - 18.2.2. Codification Rules
- 18.3. Data Quality Via Input Validation
 - 18.3.1. Efficient Data Capture
 - 18.3.2. Data-Entry Models: OCR, Keyboard, RFID, etc
 - 18.3.3. Data Validation Tests
- 18.4. Total Quality Management: Six Sigma
 - 18.4.1. TQM
 - 18.4.2. Six Sigma: Methodology and Culture
 - 18.4.3. Top-Down Design Systems and Modular Programming
 - 18.4.4. Documentation: FOLKLORE Documentation Method
- 18.5. Tests, Maintenance and Audits
 - 18.5.1. Test Processes
 - 18.5.2. Using Test Data
 - 18.5.3. Audits and External Auditing

- 18.6. Quality of Network Implemented Products
 - 18.6.1. Client-Server Technology
 - 18.6.2. Cloud Computing Technology
- 18.7. User Training
 - 18.7.1. User training strategies
 - 18.7.2. Training Guide
- 18.8. Conversion/Migration to New Systems Strategies
 - 18.8.1. Migration Strategies: Parallel, Gradual
 - 18.8.2. Migration/Conversion Plans
 - 18.8.3. Data Owners Management
- 18.9. Security/Safety
 - 18.9.1. Physical and Logical Security: Document Destruction
 - 18.9.2. E-Commerce
 - 18.9.3. Disaster-Recovery Plans
- 18.10. Assessment
 - 18.10.1. Quality Assessment Techniques
 - 18.10.2. Evaluation in Web Environments

Module 19. Regulatory compliance for information security in technology projects

- 19.1. Data Protection Regulation
 - 19.1.1. Regulatory Framework
 - 19.1.2. Subjects Obligated to Comply with the Regulations
 - 19.1.2.1. Controllers, co-responsible parties and persons in charge of treatment
 - 19.1.3. Data Protection Officer
- 19.2. Treatment of Personal Data
 - 19.2.1. Fairness, Loyalty and Transparency
 - 19.2.2. Purpose Limitation
 - 19.2.3. Data Minimisation, Accuracy and Limitation of Retention Period
 - 19.2.4. Integrity and Confidentiality
 - 19.2.5. Proactive Responsibility
- 19.3. Data Protection by Design and by Default
 - 19.3.1. Data Pseudonymization
 - 19.3.2. Data Minimization
 - 19.3.3. Organizational Measures in Accordance with the Purpose of Processing

- 19.4. Bases of lawfulness or legitimacy and authorizations for data processing data communication
 - 19.4.1. Consent
 - 19.4.2. Contractual Relationship or Pre-contractual Measures
 - 19.4.3. Fulfillment of a Legal Obligation
 - 19.4.4. Protection of Vital Interests of the Data Subject or Another Person
 - 19.4.5. Public Interest or Exercise of Public Powers
 - 19.4.6. Legitimate Interests: Interest Weighting
- 19.5. Individuals Rights
 - 19.5.1. Transparency and Information
 - 19.5.2. Access
 - 19.5.3. Rectification and Deletion (Right to be Forgotten), Limitation and Portability
 - 19.5.4. Opposition and Automated Individual Decisions
 - 19.5.5. Limits to Rights
- 19.6. Risk Analysis and Management of Personal Data Processing
 - 19.6.1. Identification of Risks and Threats to the Rights and Freedoms of Individuals
 - 19.6.2. Risk Assessment
 - 19.6.3. Risk Management Plan
- 19.7. Techniques for Ensuring Compliance with Data Protection Regulations
 - 19.7.1. Identification of Proactive Accountability Measures
 - 19.7.2. Processing Activities Register
 - 19.7.3. Security Breach Management
 - 19.7.4. Codes of Conduct and Certifications
- 19.8. The Data Protection Impact Assessment (DPA or DPIA)
 - 19.8.1. EIPD Needs Assessment
 - 19.8.2. Evaluation Methodology
 - 19.8.3. Identification of Risks and Threats
 - 19.8.4. Prior Consultation with the Supervisory Authority
- 19.9. Information Security
 - 19.9.1. Security Regulatory Framework
 - 19.9.2. ICT Security Products Assessment and Certification
 - 19.9.3. STIC Products and Services Catalog (CPSTIC)

- 19.10. Control Authorities. Violations and Penalties
 - 19.10.1. Violations
 - 19.10.2. Fines
 - 19.10.3. Penalty Procedure
 - 19.10.4. Control Authorities and Cooperation Mechanisms

Module 20. Team Management in IT Projects

- 20.1. Team Management
 - 20.1.1. Management Skills
 - 20.1.2. Human Capital Management and Managerial Functions
 - 20.1.3. Classification and Types of Management Skills
 - 20.1.4. Group Leadership Management in Companies
- 20.2. Team Building
 - 20.2.1. Team Management
 - 20.2.2. Performance Evaluation
 - 20.2.3. Delegation and Empowerment
 - 20.2.4. Commitment Management
- 20.3. Work Teams
 - 20.3.1. Culture: Mission, Vision, Values
 - 20.3.2. Planning and Strategy
 - 20.3.3. Organization and Monitoring
 - 20.3.4. Feedback and Feedforward
 - 20.3.5. Results Assessment
- 20.4. Stages in Team Training
 - 20.4.1. Dependence Stage
 - 20.4.2. Counter-Dependence Stage
 - 20.4.3. Independence Stage
 - 20.4.4. Interdependence Stage
- 20.5. IT Project Organization
 - 20.5.1. Company Planning
 - 20.5.2. Time Planning
 - 20.5.3. Resource Planning
 - 20.5.4. Costs Planning

- 20.6. Talent Management in the company
 - 20.6.1. Talent
 - 20.6.2. Talent Management
 - 20.6.3. Talent Dimensions
 - 20.6.4. Attracting Talent
- 20.7. Company Communication
 - 20.7.1. The Company's Communication Process
 - 20.7.1.1. Internal Relationships and Communication of the company
 - 20.7.1.2. Relationship between Company Organization and Communication: Centralization or Decentralization
 - 20.7.1.3. Internal and External Communication Tools
 - 20.7.2. Interpersonal Relations in the Company
 - 20.7.2.1. Interpersonal Communication and Conflicts
 - 20.7.2.2. Communication Filters and Barriers
 - 20.7.2.3. Criticism and Active Listening
 - 20.7.2.4. Active Listening Techniques
- 20.8. Negotiation Techniques in Companies
 - 20.8.1. Negotiation at the Managerial Level in Technology Companies
 - 20.8.1.1. Negotiation
 - 20.8.1.2. Styles of Negotiation
 - 20.8.1.3. Negotiation Phases
 - 20.8.2. Negotiation Techniques
 - 20.8.2.1. Negotiation Strategies and Tactics
 - 20.8.2.2. Negotiation Types
 - 20.8.3. The Figure of the Negotiating Subject
 - 20.8.3.1. Negotiator Characteristics
 - 20.8.3.2. Types of Negotiators
 - 20.8.3.3. Psychology in Negotiation



- 20.9. Coaching and Business Management
 - 20.9.1. Business Coaching
 - 20.9.2. The Practice of Coaching
 - 20.9.3. Coaching in Organizations
- 20.10. Mentoring and Business Management
 - 20.10.1. Mentoring
 - 20.10.2. The 4 Processes of a Mentoring Program
 - 20.10.2.1. Processes
 - 20.10.2.2. Mentors in Companies
 - 20.10.2.3. Protégés in Technological Companies
 - 20.10.3. Benefits of Mentoring in Companies
 - 20.10.3.1. Benefits for the Organization: Mentor and Mentored
 - 20.10.4. Differences between Mentoring and Coaching

“*Thanks to this university degree you will be able to incorporate the most advanced digital techniques for decision making in Technological Projects*”



06

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





“

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

Case Study to contextualize all content

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

“

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



You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.



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

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

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

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

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

Relearning Methodology

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

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

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

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

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



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

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

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

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



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



Study Material

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

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



Classes

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

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



Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.



Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



07 Certificate

This Advanced Master in Technological Project Management guarantees students, in addition to the most rigorous and up-to-date education, access to an Advanced Master's Degree issued by TECH Technological University.



“

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”

This **Advanced Master's Degree in Technological 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 **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 career evaluation committees.

Title: **Professional Master's Degree in Technological Project Management**

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
Technological Project
Management

- » Modality: online
- » Duration: 2 years
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Advanced Master's Degree Technological Project Management