

Advanced Master's Degree Senior Management in Industrial Companies

A M D S M I C



Advanced Master's Degree Senior Management in Industrial Companies

- » Modality: online
- » Duration: 2 years
- » Certificate: TECH Global University
- » Credits: 120 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/school-of-business/advanced-master-degree/advanced-master-degree-senior-management-industrial-companies

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01

Welcome

Nowadays, companies must thrive in global and highly competitive environments, managing to stand out and create a reputation that makes them known at an international level. For this reason, business professionals must constantly update their knowledge to keep abreast of the main developments in the sector. In the case of industrial companies, specialization must be even greater, since new work methodologies and tools are constantly emerging that can provide greater agility and safety in daily tasks, which can mark a before and after in the way of working and managing these type of companies. This TECH program has been designed with the specialization needs of business professionals in this field in mind, so that they can compete with confidence and achieve professional success.



Advanced Master's Degree in Senior Management in Industrial Companies.
TECH Global University



“

Industrial companies demand managers with extensive experience, but, above all, with a strategic and international vision of the business that will help them achieve success”

02

Why Study at TECH?

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



“

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

At TECH Global University



Innovation

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

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



The Highest Standards

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

95% | of TECH students successfully complete their studies



Networking

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

100,000+
executives trained each year

200+
different nationalities



Empowerment

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

500+ | collaborative agreements with leading companies



Talent

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

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



Multicultural Context

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

TECH students represent more than 200 different nationalities.



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



Analysis

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



Academic Excellence

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



Economy of Scale

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



Learn with the best

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

Teachers representing 20 different nationalities.



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

03

Why Our Program?

Studying this TECH program means increasing the chances of achieving professional success in senior Management in Industrial Companies.

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



“

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

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

01

A significant career boost

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

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

02

Develop a strategic and global vision of companies

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

Our global vision of companies will improve your strategic vision.

03

Consolidate the student's senior management skills

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

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

04

Take on new responsibilities

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

45% of graduates are promoted internally.

05

Access to a powerful network of contacts

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

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

06

Thoroughly develop business projects

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

20% of our students develop their own business idea.

07

Improve soft skills and management skills

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

Improve your communication and leadership skills and enhance your career.

08

Be part of an exclusive community

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

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

04 Objectives

This Advanced Master's Degree in Senior Management in Industrial Companies is designed to strengthen the management and leadership skills of students, in addition to developing new competencies and skills that will be essential in their professional development in the field of project management. After the program, the student will be able to make global decisions with an innovative perspective and an international vision, providing their company with the necessary work to guide the business towards success.



“

One of our fundamental objectives is to help you develop the essential competencies to strategically manage industrial companies”

Your goals are our goals.

We work together to help you achieve them.

The **Advanced Master's Degree in Senior Management in Industrial Companies** will enable students to:

01

Implement and deploy the strategy throughout the organization using the balanced scorecard

04

Analyze which aspects are important when carrying out the performance evaluation of my team and implement it successfully and in line with the organization's strategy

02

Discover, define and manage the fundamental processes of value generation in the company

03

Analyze one's own leadership, motivation and communication style and show effective behavior, indicating the most correct ways to generate commitment, play as a team and encourage employee responsibility



05

Deepen in the techniques, their phases and the tools related to the conceptual design that precedes the final design of the product, as well as the translation of the final customer's requirements into technical specifications that the product will have to comply with

06

In-depth breakdown of the design process of a new product from CAD design through failure analysis and drawing through to agreement that the design will meet requirements

07

Achieve a detailed knowledge of the work dynamics of the production units, and the interaction between their functions

08

Address the importance of production planning as a key tool for company profitability



09

Deepen in the fundamentals of *Lean thinking* and their main differences compared to traditional manufacturing processes

10

Analyze waste in the company, distinguishing the value of each process and the types of waste that can be found

11

Establish the importance of quality management throughout all areas of the company

12

Identify the quality costs associated with quality management and implement a system to monitor and improve them



13

In-depth breakdown of the challenges of the logistics function, its key activities and the associated costs and value realization of the logistics function and deep dive into the different types of supply chains

14

Develop the different strategies to optimize the logistics function

15

Lead and face the new business models and challenges associated with the development and implementation of Industry 4.0

16

Deepen the need for digital transformation suggested by the new business challenges in order to successfully face the near future



17

Conduct a comprehensive analysis of EPC projects

18

Manage the different stages of EPC projects

19

Manage large-scale project contracts

20

In-depth breakdown of guarantees, disputes and insurance in the construction industry



21

Master project management in a global way

22

Obtain a solid understanding of the integration phases of a project

23

Manage a project with a global interdepartmental vision

24

Analyze earned value on projects



05 Skills

This TECH program is truly innovative among all those offered in the market, as it combines, in a single curriculum, the most innovative aspects of industrial management and the management of large international projects. Thus, after passing the evaluations of the Advanced Master's Degree in Senior Management in Industrial Companies, the professional will have acquired the necessary skills to perform a quality and up-to-date practice based on the most innovative didactic methodology.





“

Develop the appropriate competences in order to perform at the highest level in the management and direction of industrial companies”

01

Efficiently manage all aspects related to industrial management to be able to compete adequately both in the present and in a future full of challenges, opportunities and changes

02

Master the tools to achieve excellence, define the business strategy and its deployment throughout the organization, process management, and structural typology to be used to better adapt to changes, as well as aspects to be taken into account for sustainability, customer management, internationalization of the company and change management, which is becoming more and more constant

03

Interpret the economic and financial data of the company, while being able to use and develop the necessary tools for a better management of all aspects related to business finances

04

Better manage all the necessary steps and phases in the design and development of new products

05

Plan and control production in order to optimize resources and adapt as best as possible to demand



06

Manage quality throughout the organization and apply the most important tools for continuous improvement of products and processes

08

Master the global environment of large turnkey construction, from the international context, markets, to project development, operation and maintenance plans and sectors such as insurance and asset management

09

Apply acquired knowledge and problem-solving skills in current or unfamiliar environments within broader contexts related to EPC projects

07

Develop better management of the entire supply chain and improve the flow of materials from suppliers to shipment of products to the customer

10

Know how to communicate design, development and management concepts of different engineering systems



11

Understand and internalize the scope of digital and industrial transformation applied to EPC project systems for efficiency and competitiveness in today's market

14

Recognize the main actors involved in the construction phase of an EPC project

12

Perform project management of this type in national and international environments



13

Understand the critical points that can affect the timing and cost of contract execution

15

Know how to manage a construction contract in international environments, paying special attention to the critical points that may affect the deadlines and costs of the execution of the contract

16

Master important aspects of contract management such as guarantees, insurance and penalties

18

Obtain the necessary skills to make relevant decisions for the development of the project in a timely manner

19

Know how to act as project manager to manage quality, communications and possible non-conformities that may arise in the project

17

Have specific knowledge in the area of arbitration and possible disputes, so that they can be prepared to participate in future project processes that they manage

20

Have skills to manage and control purchases and resources, so that they can make decisions that allow them to optimize these two factors to the maximum



06

Structure and Content

The Advanced Master's Degree in Senior Management in Industrial Companies is a program designed to enable business professionals to specialize in a field that is increasingly in demand. A program that is taught in 100% online format and that will be indispensable for the development of students, who will find in it the best content of the current academic panorama on the management of industrial companies. And, all of this, with the most innovative didactic methodology on the market.



“

A very well-structured syllabus in a fully digital format that will allow you to self-manage your study time"

Syllabus

The Advanced Master's Degree in Senior Management in Industrial Companies from TECH Global University is an intensive program that prepares the professional to face business challenges and decisions at both national and international levels. Its content is designed to promote the development of managerial skills that enable more rigorous decision-making in uncertain environments.

Throughout 3,000 hours of study, the student will analyze a multitude of practical cases through individual work, achieving high quality learning that can be applied to their daily practice. It is, therefore, an authentic immersion in real business situations.

This program deals in depth with the main areas of the company and is designed for managers to understand the management of industrial projects from a strategic, international and innovative perspective.

A plan designed for students, focused on their professional improvement and preparing them to achieve excellence in the field of industrial management. A program that understands both yours and your company's needs through innovative content based on the latest trends, and supported by the best educational methodology and an exceptional faculty, which will provide you with the skills to solve critical situations, creatively and efficiently.

This Advanced Master's Degree takes place over 2 years and is divided into 20 modules:

Module 1	Strategic Keys to Improve Competitiveness
Module 2	Project Management
Module 3	Leadership and People Management
Module 4	Corporate Finance An Economic-Financial Approach
Module 5	Design and Product Development
Module 6	Production Planning and Control
Module 7	Lean Manufacturing
Module 8	Quality Management
Module 9	The Logistics Function, Key to Compete
Module 10	Industry 4.0 and Business Intelligence The Digitized Company

Module 11	International Projects
Module 12	Turnkey Projects (EPC)
Module 13	Management and Control of Stages in Turnkey Projects (EPC)
Module 14	Contract Management in Projects
Module 15	Risk Management in Contract Management
Module 16	Project Management in Contract Management
Module 17	Project Management in Projects: Scope and Schedule Management
Module 18	Project Management in Projects: Communications and Quality Management
Module 19	Project Management in Projects: Procurement and Resource Management
Module 20	Project Management in Projects: Cost Management

Where, When and How is it Taught?

TECH offers the possibility of taking this program completely online. Throughout the 2 years of training, the student will be able to access all the contents of this program at any time, allowing them to self-manage their study time.

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

Module 1. Strategic Keys to Improve Competitiveness

1.1. Excellence in the Current Company

- 1.1.1. Adaptation to VUCA Environments
- 1.1.2. Satisfaction of Key Constituents (Stakeholders)
- 1.1.3. World Class Manufacturing
- 1.1.4. Measure of Excellence: Net Promoter Score

1.2. Business Strategy Design

- 1.2.1. General Strategy Definition Process
- 1.2.2. Definition of the Current Situation Positioning Models
- 1.2.3. Possible Strategic Movements
- 1.2.4. Strategic Models of Action
- 1.2.5. Functional and Organizational Strategies
- 1.2.6. Environmental and Organizational Analysis SWOT Analysis for Decision-Making

1.3. Strategy Deployment Balanced Scorecard

- 1.3.1. Mission, Vision, Values and Principles
- 1.3.2. Need for a Balanced Scorecard
- 1.3.3. Perspectives to Be Used in the BSC
- 1.3.4. Strategic Map
- 1.3.5. Phase to Implement a Good BSC
- 1.3.6. General Map of a BSC

1.4. Process Management

- 1.4.1. Process Description
- 1.4.2. Types of Process Main Processes
- 1.4.3. Process Prioritization
- 1.4.4. Process Representation
- 1.4.5. Measuring Processes for Improvement
- 1.4.6. Process Map
- 1.4.7. Process Reengineering

1.5. Structural Typologies Agile Organizations. ERR

- 1.5.1. Structural Typologies
- 1.5.2. The Company Seen as an Adaptable System
- 1.5.3. The Horizontal Company
- 1.5.4. Characteristics and Key Factors of Agile Organizations (ERR)
- 1.5.5. Organizations of the Future: the TEAL Organization

1.6. Design of Business Models

- 1.6.1. CANVAS Model for Business Model Design
- 1.6.2. Lean Start-up Methodology in the Creation of New Businesses and Products
- 1.6.3. The Blue Ocean Strategy

1.7. Corporate Social Responsibility and Sustainability

- 1.7.1. Corporate Social Responsibility (CSR): ISO Business School 26000
- 1.7.2. Sustainable Development Goals SDGs
- 1.7.3. The 2030 Agenda

1.8. Customer Management

- 1.8.1. The Need to Manage Customer Relationships
- 1.8.2. Elements of Customer Management
- 1.8.3. Technology and Customer Management. CRM

1.9. Management in International Environments

- 1.9.1. The Importance of the Internationalisation
- 1.9.2. Diagnosis of Export Potential
- 1.9.3. Elaboration of the Internationalisation Plan
- 1.9.4. Implementation of the Internationalization Plan
- 1.9.5. Export Assistance Tools

1.10. Change Management

- 1.10.1. The Dynamics of Change in Companies
- 1.10.2. Obstacles to Change
- 1.10.3. Factors of Adaptation to Change
- 1.10.4. Kotter's Methodology for Change Management

Module 2. Project Management

2.1. The Project

- 2.1.1. Fundamental Elements of the Project
- 2.1.2. The Project Manager
- 2.1.3. The Environment in Which Projects Operate

2.2. Project Scope Management

- 2.2.1. Scope Analysis
- 2.2.2. Project Scope Planning
- 2.2.3. Project Scope Control

2.3. Schedule Management

- 2.3.1. The Importance of the Planning
- 2.3.2. Manage Project Planning Project Schedule
- 2.3.3. Trends in Time Management

2.4. Cost Management

- 2.4.1. Project Cost Analysis
- 2.4.2. Financial Selection of Projects
- 2.4.3. Project Cost Planning
- 2.4.4. Project Cost Control

2.5. Quality, Resources and Acquisitions

- 2.5.1. Total Quality and Project Management
- 2.5.2. Project Resources
- 2.5.3. Acquisition The Contracting System

2.6. Project Stakeholders and Their Communications

- 2.6.1. The Importance of Stakeholders
- 2.6.2. Project Stakeholder Management
- 2.6.3. Project Communications

2.7. Project Risk Management

- 2.7.1. Fundamental Principles of Risk Management
- 2.7.2. Management Processes for Project Risk Management
- 2.7.3. Trends in Risk Management

2.8. Integrated Project Management

- 2.8.1. Strategic Planning and Project Management
- 2.8.2. Project Management Plan
- 2.8.3. Execution and Control Processes
- 2.8.4. Project Closure

2.9. Agile Methodologies I: Scrum

- 2.9.1. Agile and Scrum Principles
- 2.9.2. The ScrumTeam
- 2.9.3. Scrum Events
- 2.9.4. Scrum Artefacts

2.10. Agile Methodologies II: Kanban

- 2.10.1. Kanban Principles
- 2.10.2. Kanban and Scrumban
- 2.10.3. Certifications

Module 3. Leadership and People Management

3.1. The Role of the Leader

- 3.1.1. Leadership in Effective People Management
- 3.1.2. Types of Decision-Making Style in People Management
- 3.1.3. The Leader Coach
- 3.1.4. Self-Directed Teams and Empowerment

3.2. Team Motivation

- 3.2.1. Needs and Expectations
- 3.2.2. Effective Recognition
- 3.2.3. How to Enhance Team Cohesion

3.3. Communication and Conflict Resolution

- 3.3.1. Intelligent Communication
- 3.3.2. Constructive Conflict Management
- 3.3.3. Conflict Resolution Strategies

3.4. Emotional Intelligence in People Management

- 3.4.1. Emotion, Feeling and State of Mind
- 3.4.2. Emotional Intelligence
- 3.4.3. Ability Model (Mayer and Salovey): Identify, Use, Understand and Manage
- 3.4.4. Emotional Intelligence and Personnel Selection

3.5. Indicators in People Management

- 3.5.1. Productivity
- 3.5.2. Personnel Rotation
- 3.5.3. Talent Retention Rate
- 3.5.4. Staff Satisfaction Rate
- 3.5.5. Average Time Vacancies Pending Filling
- 3.5.6. Average Training Time
- 3.5.7. Average Time to Reach Goals
- 3.5.8. Absenteeism Levels
- 3.5.9. Occupational Accidents

3.6. Performance Evaluation

- 3.6.1. Performance Evaluation Components and Cycle
- 3.6.2. 360° Evaluation
- 3.6.3. Performance Management: A Process and a System
- 3.6.4. Management by Objectives
- 3.6.5. Operation of the Performance Evaluation Process

3.7. Training Plan

- 3.7.1. Fundamental Principles
- 3.7.2. Identification of Training Requirements
- 3.7.3. Training Plan
- 3.7.4. Training and Development Indicators

3.8. Identification of Potential

- 3.8.1. Potential
- 3.8.2. Soft Skills as a Key High Potential Initiator
- 3.8.3. Methodologies for Identifying Potential: Learning Agility Assessment (Lominger) and Growth Factors

3.9. The Talent Map

- 3.9.1. George Odiorne-4 Boxes Matrix
- 3.9.2. 9-Box Matrix
- 3.9.3. Strategic Actions to Achieve Effective Talent Outcomes

3.10. Talent Development Strategy and ROI

- 3.10.1. 70-20-10 Learning Model for Soft Skills
- 3.10.2. Career Paths and Succession
- 3.10.3. Talent ROI

Module 4. Corporate Finance And Economic-Financial Approach**4.1. The Company in Our Environment**

- 4.1.1. Production Costs
- 4.1.2. Companies in Competitive Markets
- 4.1.3. Monopolistic Competition

4.2. Analysis of Financial Statements I: The Balance

- 4.2.1. The Assets CP and LP Resources
- 4.2.2. Liabilities CP and LP Obligations
- 4.2.3. Net Assets Shareholder Returns

4.3. Analysis of Financial Statements II: the Income Statement

- 4.3.1. The Structure of the Income Statement
Income, Costs, Expenses and Profit or Loss
- 4.3.2. Main Ratios to Analyze the Income Statement
- 4.3.3. Profitability Analysis

4.4. Treasury Management

- 4.4.1. Collections and Payments Cash-Forecast
- 4.4.2. Impact and Management of Treasury
Deficits/Surplus Corrective Measures
- 4.4.3. Effect Flows Analysis
- 4.4.4. Bad Debt Portfolio Management and Impact

4.5. Sources of Financing to CP and LP

- 4.5.1. CP Financing, Instruments
- 4.5.2. LP Financing, Instruments
- 4.5.3. Types of Interest and Their Structure

4.6. Interaction between the Company and the Bank

- 4.6.1. The Financial System and the Banking
Business
- 4.6.2. Corporate Banking Products
- 4.6.3. The Company Analyzed by the Bank

4.7. Analytical or Cost Accounting

- 4.7.1. Cost Types Decisions Based on Costs
- 4.7.2. Full-Costing
- 4.7.3. Direct Costing
- 4.7.4. Cost Model by Center and by Activity

4.8. Investment Analysis and Valuation

- 4.8.1. The Company and the Investment Decisions
Scenarios and Situations
- 4.8.2. Investment Valuation
- 4.8.3. Company Valuation

4.9. Corporate Accounting

- 4.9.1. Capital Increase and Reduction
- 4.9.2. Dissolution, Liquidation and Transformation
of Companies
- 4.9.3. Combination of Companies: Mergers and
Acquisitions

4.10. Foreign Trade Finance

- 4.10.1. Foreign Markets: The Decision to Export
- 4.10.2. The Foreign Exchange Market
- 4.10.3. International Payment and Collection
Methods
- 4.10.4. Transportation, Incoterms and Insurance

Module 5. Design and Product Development

5.1. QFD in Product Design and Development (Quality Function Deployment)

- 5.1.1. From the Voice of the Customer to Technical Requirements
- 5.1.2. The House of Quality/Phases for its Development
- 5.1.3. Advantages and Limitations

5.2. Design Thinking

- 5.2.1. Design, Need, Technology and Strategy
- 5.2.2. Process Stages
- 5.2.3. Used Tools and Techniques

5.3. Concurrent Engineering

- 5.3.1. Concurrent Engineering Fundamentals
- 5.3.2. Concurrent Engineering Methodologies
- 5.3.3. Used Tools

5.4. Program. Planning and Definition

- 5.4.1. Requirements. Quality Management
- 5.4.2. Development Phases Time Management
- 5.4.3. Materials, Feasibility, Processes Cost Management
- 5.4.4. Project Team Human Resource Management
- 5.4.5. Information. Communication Management
- 5.4.6. Risk Analysis Risk Management

5.5. Product. Design (CAD) and Development

- 5.5.1. Information Management/PLM/Product Life Cycle
- 5.5.2. Product Failure Modes and Effects
- 5.5.3. CAD Construction Reviews
- 5.5.4. Product and Manufacturing Drawings
- 5.5.5. Design Verification

5.6. Prototypes. Development

- 5.6.1. Rapid Prototyping
- 5.6.2. Control Plan
- 5.6.3. Experiment Design
- 5.6.4. Analysis of Measuring Systems

5.7. Productive Process. Design and Development

- 5.7.1. Modes and Effects of Process Failure
- 5.7.2. Design and Construction of Manufacturing Tooling
- 5.7.3. Design and Construction of Checking Fixtures (Gauges)
- 5.7.4. Adjustment Phases
- 5.7.5. Production Start-Up
- 5.7.6. Initial Process Evaluation

5.8. Product and Process. Validation

- 5.8.1. Evaluation of Measurement Systems
- 5.8.2. Validation Tests
- 5.8.3. Statistical Process Control (SPC)
- 5.8.4. Product Certification

5.9. Change Management. Improvement and Corrective Actions

- 5.9.1. Types of change
- 5.9.2. Variability Analysis, Improvement
- 5.9.3. Lessons Learned and Proven Practices
- 5.9.4. Process of Change

5.10. Innovation and Technology Transfer

- 5.10.1. Intellectual Property
- 5.10.2. Innovation
- 5.10.3. Technology Transfer

Module 6. Production Planning and Control**6.1. Phases of Production Planning**

- 6.1.1. Advanced Planning
- 6.1.2. Sales Forecasting, Methods
- 6.1.3. Takt-Time Definition
- 6.1.4. Material Plan-MRP-Minimum Stock
- 6.1.5. Personnel Plan
- 6.1.6. Equipment Needs

6.2. Production Plan (PDP)

- 6.2.1. Factors to Consider
- 6.2.2. Push Planning
- 6.2.3. Pull Planning
- 6.2.4. Mixed Systems

6.3. Kanban

- 6.3.1. Types of Kanban
- 6.3.2. Kanban Uses
- 6.3.3. Autonomous Planning: 2-Bin Kanban

6.4. Production Control

- 6.4.1. PDP Deviations and Reporting
- 6.4.2. Production Performance Monitoring: OEE
- 6.4.3. Total Capacity Tracking: TEEP

6.5. Production Organization

- 6.5.1. Production Team
- 6.5.2. Process Engineering
- 6.5.3. Maintenance
- 6.5.4. Material Control

6.6. Total Productive Maintenance (TPM)

- 6.6.1. Corrective Maintenance
- 6.6.2. Autonomous Maintenance
- 6.6.3. Preventative Maintenance
- 6.6.4. Predictive Maintenance
- 6.6.5. Maintenance Efficiency Indicators MTBF - MTTR

6.7. Plant Layout

- 6.7.1. Conditioning Factors
- 6.7.2. In-Line Production
- 6.7.3. Production in Work Cells
- 6.7.4. Applications
- 6.7.5. SLP Methodology

6.8. Just-In-Time (JIT)

- 6.8.1. Description and Origins of JIT
- 6.8.2. Objectives
- 6.8.3. Application of JIT Product Sequencing

6.9. Theory of Constraints (TOC)

- 6.9.1. Fundamental Principles
- 6.9.2. The 5 Steps of TOC and Its Application
- 6.9.3. Advantages and Disadvantages

6.10. Quick Response Manufacturing (QRM)

- 6.10.1. Description
- 6.10.2. Key Points for Structuring
- 6.10.3. QRM Implementation

Module 7. Lean Manufacturing

7.1. Lean Thinking

- 7.1.1. Structure of the Lean System
- 7.1.2. Lean Principles
- 7.1.3. Lean Versus Traditional Manufacturing Processes

7.2. Waste in the Company

- 7.2.1. Value Vs. Waste in Lean Environments
- 7.2.2. Types of Waste (MUDAS)
- 7.2.3. Lean Process of Thinking

7.3. The 5 S

- 7.3.1. 5S Principles and How They Can Help Improve Productivity
- 7.3.2. The 5 S: Seiri, Seiton, Seiso, Seiketsu and Shitsuke
- 7.3.3. Implementation of the 5 S in the Company

7.4. Lean Diagnostic Tools. VSM. Value Stream Maps

- 7.4.1. Value Adding Activities (VA), Necessary Activities (NNVA) and Non-Value Adding Activities (NVA)
- 7.4.2. The 7 Tools of Value Stream mapping(Value Stream Mapping)
- 7.4.3. Process Activity Mapping
- 7.4.4. Supply Chain Response Mapping
- 7.4.5. The Production Variety Funnel
- 7.4.6. Quality Filter Mapping
- 7.4.7. Demand Amplification Mapping
- 7.4.8. Decision Point Analysis
- 7.4.9. Mapping of the Physical Structure

7.5. Lean Operational Tools

- 7.5.1. Smed
- 7.5.2. Jidoka
- 7.5.3. Poka-Yoke
- 7.5.4. Batch Reduction
- 7.5.5. Pous Poka-Yoke

7.6. Lean Tools for Production Monitoring, Planning and Control

- 7.6.1. Visual Management
- 7.6.2. Standardization
- 7.6.3. Production Leveling (Heijunka)
- 7.6.4. Cellular Manufacturing

7.7. The Kaizen Method for Continuous Improvement

- 7.7.1. Kaizen Principles
- 7.7.2. Kaizen Methodologies Kaizen Blitz, Gemba Kaizen, Kaizen Teian
- 7.7.3. Problem Solving Tools A3 Report,
- 7.7.4. Main Obstacles to Kaizen Implementation

7.8. Roadmap for Lean Implementation

- 7.8.1. General Aspects of Implementation
- 7.8.2. Phases of Implementation
- 7.8.3. Information Technologies in Lean Implementation
- 7.8.4. Success Factors in Lean Implementation

7.9. KPIs for Measuring Lean Performance

- 7.9.1. OEE- Overall Equipment Efficiency
- 7.9.2. TEEP- Total Effective Equipment Effectiveness Performance
- 7.9.3. FTT- First-Time Quality
- 7.9.4. DTD- Dock to Dock Time
- 7.9.5. OTD- On-Time Delivery
- 7.9.6. BTS- Manufacturing According to Program
- 7.9.7. ITO- Inventory Turnover Rate
- 7.9.8. VAR- Value Added Ratio
- 7.9.9. PPMs- Parts Per Million Defects
- 7.9.10. FR- Delivery Fulfillment Rate
- 7.9.11. IFA-Accident Frequency Index

7.10. The Human Dimension of Lean. Staff Participation Systems

- 7.10.1. The Lean Project Team Application of Teamwork
- 7.10.2. Operator Versatility
- 7.10.3. Improvement Groups
- 7.10.4. Suggestion Programs

Module 8. Quality Management
8.1. Total Quality

- 8.1.1. Total Quality Management
- 8.1.2. External and Internal Customer
- 8.1.3. Quality Costs
- 8.1.4. Continuous Improvement and the Deming Philosophy

8.2. ISO 9001:15 Quality Management System

- 8.2.1. The 7 Principles of ISO 9001:15 Quality Management
- 8.2.2. The Process Approach
- 8.2.3. ISO 9001:15 Requirements
- 8.2.4. Stages and Recommendations for Implementation
- 8.2.5. Deployment Objectives in a Hoshin-Kanri-type Model
- 8.2.6. Certification Audit

8.3. Integrated Management Systems

- 8.3.1. Environmental Management System ISO Business School 14000
- 8.3.2. Occupational Risk Management System: ISO Business School 45001
- 8.3.3. Integration of Management Systems

8.4. Excellence in Management: EFQM Model

- 8.4.1. Principles and Fundamentals of EFQM Model
- 8.4.2. New Criteria of the EFQM Model
- 8.4.3. EFQM Diagnostic Tool: REDER Matrixes

8.5. Quality Tools

- 8.5.1. Basic Tools
- 8.5.2. SPC Statistical Process Control
- 8.5.3. Control Plan and Control Guidelines for Product Quality Management

8.6. Advanced Tools and Troubleshooting Tools

- 8.6.1. FMEA
- 8.6.2. 8D Report
- 8.6.3. The 5 Whys
- 8.6.4. The 5W + 2H
- 8.6.5. Benchmarking

8.7. Continuous Improvement Methodology I: PDCA

- 8.7.1. The PDCA Cycle and Its Stages
- 8.7.2. Application of the PDCA Cycle to Lean Manufacturing Development
- 8.7.3. Keys to Success of PDCA Projects

8.8. Continuous Improvement Methodology II: Six-Sigma

- 8.8.1. Six-Sigma Description
- 8.8.2. Six-Sigma Principles
- 8.8.3. Six-Sigma Project Selection
- 8.8.4. Six-Sigma Project Stages DMAIC Methodology
- 8.8.5. Six-Sigma Roles
- 8.8.6. Six-Sigma and Lean Manufacturing

8.9. Quality Suppliers. Audits. Testing and Laboratory

- 8.9.1. Reception Quality Concerted Quality
- 8.9.2. Internal Audits Management System
- 8.9.3. Product and Process Audits
- 8.9.4. Phases to Perform Audits
- 8.9.5. Auditor Profile
- 8.9.6. Testing, Laboratory and Metrology

8.10. Organizational Aspects of Quality Management

- 8.10.1. Management's Role in Quality Management
- 8.10.2. Organization of the Quality Area and the Relationship with Other Areas
- 8.10.3. Quality Circles

Module 9. The Logistics Function, Key to Compete

9.1. Logistical Function of and the Supply Chain

- 9.1.1. Logistics Is the Key to a Company's Success
- 9.1.2. Logistics Challenges
- 9.1.3. Key Activities to Logistics How to Obtain Logistic Function Value
- 9.1.4. Types of Supply Chain
- 9.1.5. Supply Chain Management
- 9.1.6. Logistics Costs

9.2. Logistics Optimization Strategies

- 9.2.1. Cross-Docking Strategy
- 9.2.2. Application of Agile Methodology to Logistics Management
- 9.2.3. Outsourcing of Logistic Processes
- 9.2.4. Picking or Efficient Order Picking

9.3. Lean Logistics

- 9.3.1. Lean Logistics in Supply Chain Management
- 9.3.2. Analysis of Waste in the Logistics Chain
- 9.3.3. Application of a Lean System in Supply Chain Management

9.4. Warehouse Management and Automation

- 9.4.1. The Role of Warehouses
- 9.4.2. Warehouse Management
- 9.4.3. Stocks Management
- 9.4.4. Warehouse Typology
- 9.4.5. Load Units
- 9.4.6. Organization of a Warehouse
- 9.4.7. Storage and Handling Elements

9.5. Procurement Management

- 9.5.1. The Role of Distribution as an Essential Part of Logistics. Internal Vs. External Logistics
- 9.5.2. The Traditional Relationship with Suppliers
- 9.5.3. The New Paradigm of Supplier Relationships
- 9.5.4. How to Classify and Select New Suppliers
- 9.5.5. How to Develop Effective Procurement Management

9.6. Information Systems and Logistics Control

- 9.6.1. Requirements of a Logistics Information and Control System
- 9.6.2. 2 Types of Information Systems and Logistics Control
- 9.6.3. Big Data Applications in Logistics Management
- 9.6.4. The Importance of Data in Logistics Management
- 9.6.5. The Balanced Scorecard Applied to Logistics Main Management and Control Indicators

9.7. Reverse Logistics

- 9.7.1. Keys to Reverse Logistics
- 9.7.2. Reverse Vs. Direct Logistics Flows
- 9.7.3. Operations within the Framework of Reverse Logistics
- 9.7.4. How to Implement a Reverse Distribution Channel
- 9.7.5. Final Alternatives for Products in the Reverse Channel
- 9.7.6. Costs of Reverse Logistics

9.8. New Logistic Strategies

- 9.8.1. Artificial Intelligence and Robotization
- 9.8.2. Green Logistics and Sustainability
- 9.8.3. Internet of Things Applied to Logistics
- 9.8.4. The Digitized Warehouse
- 9.8.5. E-business and the New Distribution Models
- 9.8.6. The Importance of Last Mile Logistics

9.9. Retail Chain Benchmarking

- 9.9.1. Commonalities of Successful Value Chains
- 9.9.2. Inditex Group Value Chain Analysis
- 9.9.3. Amazon Value Chain Analysis

9.10. Pandemic Logistics

- 9.10.1. General Scenario
- 9.10.2. Critical Supply Chain Issues in a Pandemic Scenario
- 9.10.3. Implications of Cold Chain Requirements on the Establishment of the Vaccine Supply Chain
- 9.10.4. Types of Supply Chains for the Distribution of Vaccines

Module 10. Industry 4.0 and Business Intelligence. The Digitized Company

10.1. Automation and Industrial Robotics

- 10.1.1. Phases in Process Automation
- 10.1.2. Industrial Hardware for Automation and Robotics
- 10.1.3. The Work Cycle and Its Programming Software

10.2. Process Automation: RPA

- 10.2.1. Automatable Administrative Processes
- 10.2.2. Software Structure
- 10.2.3. Examples of Application

10.3. MES, SCADA, GMAO, SGA, MRPII Systems

- 10.3.1. Product Control with MES Systems
- 10.3.2. Engineering and Maintenance SCADA and GMAO
- 10.3.3. Procurement and Logistics: SGA and MPRII

10.4. Business Intelligence Software

- 10.4.1. Fundamentals of BI
- 10.4.2. Software Structure
- 10.4.3. Application Possibilities

10.5. ERP Software

- 10.5.1. ERP Description
- 10.5.2. Use Reach
- 10.5.3. Leading ERPs in the Market

10.6. IoT and Business Intelligence

- 10.6.1. IoT: the Connected World
- 10.6.2. Data Sources
- 10.6.3. Total Control through IoT + BI
- 10.6.4. Blockchain

10.7. Main BI Software in the Market

- 10.7.1. Power BI
- 10.7.2. Qlik
- 10.7.3. Tableau

10.8. Microsoft Power BI

- 10.8.1. Features
- 10.8.2. Examples of Application
- 10.8.3. The Future of Power BI

10.9. Machine Learning, Artificial Intelligence, Optimization and Prediction in the Enterprise

- 10.9.1. Machine Learning and Artificial Intelligence
- 10.9.2. Process Optimization
- 10.9.3. The Importance of Data Driven Forecasting

10.10. Big Data Applied to the Business Environment

- 10.10.1. Applications in the Production Environment
- 10.10.2. Applications at the Strategic Management Level
- 10.10.3. Applications in Marketing and Sales

Module 11. International Projects

11.1. Projects and Organizational Context

- 11.1.1. Projects in the Organisation
- 11.1.2. Project Elements
- 11.1.3. The Importance of the Project in the Organisation

11.2. Types of Projects by Service

- 11.2.1. Types of Projects
- 11.2.2. Project Analysis
- 11.2.3. Project Orientation

11.3. Main Processes in the Development of a Project

- 11.3.1. Start-up and Planning Process
- 11.3.2. Execution and Monitoring
- 11.3.3. Closing Process

11.4. Cost, Scope and Quality Constraints Analysis

- 11.4.1. Cost Restriction Analysis
- 11.4.2. Scope Restriction
- 11.4.3. Quality Restriction

11.5. Time, Resource and Risk Restrictions

- 11.5.1. Time Restriction Analysis
- 11.5.2. Resource Restrictions
- 11.5.3. Risk Restrictions

11.6. Analysis of Contract Types

- 11.6.1. Unit Price Contract
- 11.6.2. Lump Sum Contract
- 11.6.3. Cost Plus Margin Contract

11.7. Project Management by Typology

- 11.7.1. Project Management at Unit Price
- 11.7.2. Lump Sum Project Management
- 11.7.3. Cost Plus Margin Project Management

11.8. Project, Program and Portfolio

- 11.8.1. Analysis of the Project in the Organisation
- 11.8.2. Analysis of the Program in the Organization
- 11.8.3. Analysis of the Portfolio in the Organization

11.9. Stakeholders in the Project

- 11.9.1. Project Stakeholder Pyramid
- 11.9.2. Analysis of the Stakeholders
- 11.9.3. Interaction of the Stakeholders

11.10. Analysis of the Organization's Process Assets

- 11.10.1. Asset Analysis in Start-up and Planning
- 11.10.2. Analysis of Assets in Execution and Control
- 11.10.3. Analysis of Assets at Closing

Module 12. Turnkey Projects (EPC)

12.1. EPC Project

- 12.1.1. EPC Project Context
- 12.1.2. Project Components
- 12.1.3. Needs Analysis

12.2. EPC Project Stages

- 12.2.1. Identification of Stages in EPC Projects
- 12.2.2. Identification of Initial Needs in Stages
- 12.2.3. Timing of Each Stage

12.3. Management of the E-Engineering Stage

- 12.3.1. Analysis of Stage E
- 12.3.2. Timeline for Stage E
- 12.3.3. Necessary Resources for Stage E

12.4. Analysis of the E-Engineering Stage

- 12.4.1. Structure Required for Stage E Development
- 12.4.2. Restrictions
- 12.4.3. Difficulties and Risks

12.5. Management of the P-Procurement Stage

- 12.5.1. Analysis of Stage P
- 12.5.2. Timeline
- 12.5.3. Resources Required

12.6. Analysis of the P-Procurement Stage

- 12.6.1. Structure Required for Stage P Development
- 12.6.2. Restrictions
- 12.6.3. Difficulties and Risks

12.7. Management of the C-Construction Stage

- 12.7.1. Analysis of Stage C
- 12.7.2. Timeline
- 12.7.3. Resources Required

12.8. Analysis of the C-Construction Stage

- 12.8.1. Structure Required for Stage C Development
- 12.8.2. Restrictions
- 12.8.3. Difficulties and Risks

12.9. EPC Projects: HR Department

- 12.9.1. Main Functions
- 12.9.2. Resources Required for This Department
- 12.9.3. Coordination and Communications with the Rest of the Project

12.10. EPC Projects: Contracts Department

- 12.10.1. Main Functions
- 12.10.2. Resources Required for This Department
- 12.10.3. Coordination and Communications with the Rest of the Project

Module 13. Management and Control of Stages in Turnkey Projects (EPC)
13.1. Coordination of Stages in EPC Projects

- 13.1.1. Stage Planning
- 13.1.2. Communications between Teams
- 13.1.3. Incident Resolution of Process Stages

13.2. Stage C: Main Structural Components: Quality

- 13.2.1. Component Q Quality
- 13.2.2. Analysis of the Quality Part of the Project
- 13.2.3. Structure and Importance

13.3. Stage C: Main Structural Components: Health and Safety

- 13.3.1. HSE Component Health and Safety
- 13.3.2. Analysis of the Health and Safety Part of the Project
- 13.3.3. Structure and Importance

13.4. Stage C: Main Structural Components: Costs

- 13.4.1. Component C. Cost
- 13.4.2. Analysis of the Cost Control Part of the Project
- 13.4.3. Structure and Importance

13.5. Stage C: Main Structural Components: Deadline

- 13.5.1. Component P. Time Frame
- 13.5.2. Analysis of the Deadline Control Part of the Project
- 13.5.3. Structure and Importance

13.6. International EPC Project Management

- 13.6.1. Project Manager Management
- 13.6.2. Characteristics of the Manager
- 13.6.3. Coordination and Communication

13.7. International EPC Project Analysis

- 13.7.1. Global Analysis of the Project from the Management
- 13.7.2. Management Reporting Processes
- 13.7.3. Control of the Main KPIs of the Project

13.8. EPC Project Deviations

- 13.8.1. Main EPC Project Deviations
- 13.8.2. Deviations Analysis
- 13.8.3. Customer Deviation Notifications Procedure

13.9. Analysis and Monitoring of Economic Deviations of the Project with Respect to Contract

- 13.9.1. Production Control
- 13.9.2. Cost Control
- 13.9.3. Product Monitoring Vs. Cost

13.10. Non-conformity Management in EPC Projects

- 13.10.1. Main Non-conformities in EPC Projects
- 13.10.2. Management Procedures
- 13.10.3. Analysis and Mitigation

Module 14. Contract Management in Projects

14.1. Contract Management in Projects

- 14.1.1. Contract Management Analysis in Projects
- 14.1.2. Need for Contract Management
- 14.1.3. Contract Management Objectives

14.2. Functions of Contract Manager

- 14.2.1. Main Functions of the CM in Projects
- 14.2.2. Characteristics of the CM Position
- 14.2.3. Contract Management Indicators

14.3. Contract Management Process

- 14.3.1. Design of a Contract Management Plan
- 14.3.2. Management Plan Stages
- 14.3.3. Contract Management Adversities

14.4. Contract Management Success Factors

- 14.4.1. Analysis of Main Success Factors
- 14.4.2. Planning and Development of Contract Management
- 14.4.3. Performance Management and Partner Relationships

14.5. Main Stage of Contract Management

- 14.5.1. Planning and Execution
- 14.5.2. Control and Monitoring During Execution
- 14.5.3. Control and Monitoring After Execution

14.6. Factors to Take into Account in the Management of Construction Contracts

- 14.6.1. Setting Objectives and Strategies
- 14.6.2. Design and Construction Phase of Lump Sum Contracts
- 14.6.3. Relations with Contractors

14.7. Contract Manager Challenges

- 14.7.1. Successful Contract Management and Administration
- 14.7.2. Customer Communications Management
- 14.7.3. Contract Analysis and Performance

14.8. Aspects to Resolve

- 14.8.1. Contract Negotiation and Approval
- 14.8.2. Control During Ejection
- 14.8.3. Control of Compliance with Contractual Obligations

14.9. Aspects to Be Supervised

- 14.9.1. Contract Negotiation and Approval
- 14.9.2. Control During Ejection
- 14.9.3. Control of Compliance with Contractual Obligations

14.10. Management of Project Factors by the Contract Manager

- 14.10.1. Scope Management
- 14.10.2. Cost Management
- 14.10.3. Risk and Change Management

Module 15. Risk Management in Contract Management

15.1. International Contract Management

- 15.1.1. Contract Management According to PMBOOK
- 15.1.2. Procurement Control and Management According to PMBOOK
- 15.1.3. Importance and Involvement of the Contract Manager

15.2. Contract Management & Project Management

- 15.2.1. Relationship between Contract Management & Project Management
- 15.2.2. Collaboration between CM and PM
- 15.2.3. Control of Major Construction Site Factors

15.3. Risk Management by Contract Manager

- 15.3.1. Identification of Contract Risks
- 15.3.2. Risk Classification
- 15.3.3. Matrix Development and Implementation

15.4. Risk Analysis by Contract Manager

- 15.4.1. Identification of Risk Managers
- 15.4.2. Follow-up of Evolution
- 15.4.3. Risk Mitigation

15.5. Types of Guarantees

- 15.5.1. Classification
- 15.5.2. Importance of Collateral Management
- 15.5.3. Costs and Expiration

15.6. Penalty Analysis

- 15.6.1. Type of Penalties According to Contract
- 15.6.2. Penalty Control by the Contract Manager
- 15.6.3. Effective Contract Management in the Face of Penalties

15.7. Construction Insurance Management

- 15.7.1. Types of Construction Insurance
- 15.7.2. Insurance Deadlines
- 15.7.3. Importance of Insurance

15.8. Analysis of Construction Insurance

- 15.8.1. Contract Management in Insurance Management
- 15.8.2. Calculations and Costs for Construction Insurance
- 15.8.3. Validity of Insurance

15.9. Contract Management and Legal Department

- 15.9.1. Conexion of the Contract Manager and Legal Department
- 15.9.2. Importance of Legal Knowledge of the Contract manager
- 15.9.3. Communication from the Legal Point of View of the Contract manager

15.10. Contract Manager and Contractors

- 15.10.1. Contract manager Communications with the Contractor
- 15.10.2. Follow-up of the Contract with the Contractor
- 15.10.3. Importance of Communications Traceability Control

Module 16. Project Management in Contract Management

16.1. Contract Management and Budget

- 16.1.1. Objectives of Budget Management by the Contract Manager
- 16.1.2. Main Types of Budgets
- 16.1.3. Budget According to Cost Structure

16.2. Contract Management and Site Control

- 16.2.1. Objectives of Site Control Management
- 16.2.2. Hiring of an Inspection Body
- 16.2.3. Verification and Monitoring of the Work

16.3. Contract Management and Health and Safety Control on Site

- 16.3.1. Objectives of Health and Safety Control Management at the Construction Site
- 16.3.2. Aspects to Consider for Health and Safety control
- 16.3.3. On-site Verification and Follow-up

16.4. Contract Management and Subcontracting

- 16.4.1. Importance of the Contract Manager's Involvement in the Management of Subcontracting Contracts
- 16.4.2. Types of Subcontracting Contracts
- 16.4.3. Analysis of Contracts with Subcontractors

16.5. Subcontracting Process to Be Followed by the Contract Manager

- 16.5.1. Bidding and Comparison
- 16.5.2. Pre-selection and Pre-recruitment
- 16.5.3. Subcontract Award

16.6. Monitoring of Changes in Subcontractor Contracts

- 16.6.1. Importance of Change Tracking
- 16.6.2. Control of Changes in Time and Cost
- 16.6.3. Need for Timely Notifications

16.7. Contract Management and Outsourcing Contract

- 16.7.1. Basics of the Outsourcing Services Contract
- 16.7.2. Contract Management in This Type of Contracts
- 16.7.3. Points to Consider

16.8. Contract Management and Contract Disputes

- 16.8.1. Intervention of the Contract Manager in Disputes
- 16.8.2. Technical and Legal Difficulty in International Arbitration Cases
- 16.8.3. Importance of the Contract Management in Future Disputes

16.9. Classification of Disputes and Arbitrations

- 16.9.1. Types of Disputes and Arbitrations
- 16.9.2. Preparing Documentation for Disputes
- 16.9.3. Importance of Traceability in Future Disputes

16.10. Customers: Manager and Customer

- 16.10.1. Customers: manager Communications with the Customer
- 16.10.2. Follow-up of the Contract with the Customer
- 16.10.3. Importance of Communications Traceability Control

Module 17. Project Management in Projects: Scope and Schedule Management
17.1. Scope Control

- 17.1.1. Scope of the Project
- 17.1.2. Project Scope Baseline
- 17.1.3. The Importance of the Control Account

17.2. Requirement Management

- 17.2.1. Requirements Management
- 17.2.2. Categories
- 17.2.3. Management Process

17.3. Scope Management

- 17.3.1. Planning and Scope Management
- 17.3.2. Gather Requirements
- 17.3.3. Particularities of Scope

17.4. Scope Analysis

- 17.4.1. Preparation of the WBS
- 17.4.2. Scope Validation
- 17.4.3. Scope Control

17.5. Timeline Control

- 17.5.1. Project Timeline
- 17.5.2. Baseline of the Timeline
- 17.5.3. Critical Path Analysis

17.6. Timeline Elaboration

- 17.6.1. Gantt Chart
- 17.6.2. Predecessor and Successor Activities
- 17.6.3. Restrictions between Activities

17.7. Schedule Management

- 17.7.1. Planning and Timeline Management
- 17.7.2. Activity Description
- 17.7.3. Activity Sequencing

17.8. Study and Analysis of the Timeline

- 17.8.1. Estimated Duration of Activities
- 17.8.2. Development of the Timeline
- 17.8.3. Timeline Control

17.9. Construction Project Acceleration Plan

- 17.9.1. Analysis of the Acceleration Plan
- 17.9.2. Timeline
- 17.9.3. Resources

17.10. Recovery Plan in Construction Project

- 17.10.1. Analysis of the Recuperation Plan
- 17.10.2. Timeline
- 17.10.3. Resources

Module 18. Project Management in Projects: Communications and Quality Management
18.1. Communication Control

- 18.1.1. Project Communications
- 18.1.2. Dimensions of Project Communication
- 18.1.3. Communication Skills

18.2. Project Communications

- 18.2.1. Communication in Meetings
- 18.2.2. Channels of Project Communication
- 18.2.3. Formal Ways of Communication

18.3. Communication Management

- 18.3.1. Planning of Communication Management
- 18.3.2. Project Communications Management
- 18.3.3. Control

18.4. Project Quality Control

- 18.4.1. Project Quality
- 18.4.2. Project Quality Costs
- 18.4.3. Importance of Quality

18.5. Project Quality Management

- 18.5.1. Planning of Quality Management
- 18.5.2. Quality Management
- 18.5.3. Control

18.6. Quality: Nonconformities in Project

- 18.6.1. The Importance of NCs
- 18.6.2. Customer Nonconformities
- 18.6.3. Contractor Nonconformities

18.7. Project Stakeholder Management

- 18.7.1. Stakeholder Expectation Management
- 18.7.2. Interpersonal and Team Skills
- 18.7.3. Conflict Management

18.8. Project Stakeholder Analysis

- 18.8.1. Identifying Stakeholders
- 18.8.2. Engagement Planning
- 18.8.3. Management and Monitoring Engagement

18.9. Project Integration Management

- 18.9.1. Development of the Project Charter
- 18.9.2. Development of the Project Management Plan
- 18.9.3. Direction and Management of Project Work

18.10. Project Integration Control

- 18.10.1. Project Knowledge Management
- 18.10.2. Work Control
- 18.10.3. Integrated Change Control and Project Closure

Module 19. Project Management in Projects: Purchasing and Resource Management

19.1. Control of Purchases

- 19.1.1. Project Purchases
- 19.1.2. The Buyer
- 19.1.3. The Supplier

19.2. Project Purchase Cycle

- 19.2.1. Analysis of Purchase Cycle
- 19.2.2. Stage Description
- 19.2.3. Stage Study

19.3. Purchase Contract

- 19.3.1. Elements of the Contract
- 19.3.2. Contract Terminology in Contract
- 19.3.3. Control of Claims and Litigation

19.4. Project Purchase Management

- 19.4.1. Types of Suppliers
- 19.4.2. Procurement Category
- 19.4.3. Types of Contracts

19.5. Project Purchase Analysis

- 19.5.1. Purchasing Management Planning
- 19.5.2. Execution of Purchases
- 19.5.3. Control of Purchases

19.6. Resources Control

- 19.6.1. Project Resources
- 19.6.2. Conflict Management Skills
- 19.6.3. Levels of Conflict and Resolution

19.7. Management of Resources by Objectives

- 19.7.1. Management by Objectives (MBO)
- 19.7.2. Different Roles in the Projects
- 19.7.3. Types of Leadership

19.8. Project Resource Management

- 19.8.1. Resources Management Planning
- 19.8.2. Estimated Resources of the Activities
- 19.8.3. Obtaining the Necessary Resources

19.9. Project Resource Analysis

- 19.9.1. Resource Team Development
- 19.9.2. Team Management
- 19.9.3. Equipment Control

19.10. Analysis of the Resource Interview Process from the PM

- 19.10.1. Interview Process
- 19.10.2. Analysis by the Project Manager
- 19.10.3. Factors to Consider for a Successful Result

Module 20. Project Management in Projects: Resource Management

20.1. Cost Control: Project Margin

- 20.1.1. Project Costs
- 20.1.2. Calculation of Initial Margin
- 20.1.3. Financial Control

20.2. Cost Control: Cash Flow

- 20.2.1. Analysis of the Projects Cash-Flow
- 20.2.2. Production
- 20.2.3. Factors

20.3. Activity Cost Estimation

- 20.3.1. Cost Estimation Techniques
- 20.3.2. Factors in Favor and Against the Estimation of Activities
- 20.3.3. Aspects a Take into Account in the Estimate of Costs

20.4. Project Earned Value Management and Control

- 20.4.1. Basics of Earned Value
- 20.4.2. Processes
- 20.4.3. Project Control and Importance

20.5. Control and Management of Project Earned Term

- 20.5.1. Basics of Earned Term
- 20.5.2. Processes
- 20.5.3. Project Control and Importance

20.6. Project Cost Management

- 20.6.1. Plan
- 20.6.2. Cost Estimation
- 20.6.3. Determination of the Budget

20.7. Project Cost Analysis

- 20.7.1. Cost Control
- 20.7.2. Production Control
- 20.7.3. Cost Analysis Vs. Production

20.8. S-Curve Management in the Project

- 20.8.1. Fundamentals about the S-Curve
- 20.8.2. Management Processes
- 20.8.3. Importance of the S-Curve

20.9. S-Curve Control and Elaboration in the Project

- 20.9.1. Production
- 20.9.2. Monitoring
- 20.9.3. Control and Deviations

20.10. Project Financial Study

- 20.10.1. NPV- Net Present Value
- 20.10.2. IRR-Internal Rate of Return on Project
- 20.10.3. Payback- Payback Period



07

Methodology

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

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





“

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

TECH Business School uses the Case Study to contextualize all content

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

“

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



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



A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and business reality is taken into account.

“

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

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

What should a professional do in a given situation? This is the question we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They must integrate all their knowledge, research, argue and defend their ideas and decisions.

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

Relearning Methodology

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

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

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

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

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



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

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

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

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

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



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



Study Material

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

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



Classes

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

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



Management Skills Exercises

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



Additional Reading

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





Case Studies

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



Interactive Summaries

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

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



Testing & Retesting

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



08

Our Students' Profiles

The Advanced Master's Degree in Senior Management in Industrial Companies is a program aimed at experienced professionals who want to update their knowledge and advance in their professional career, achieving that extra training that will allow them to excel in a highly competitive sector. In addition, the diversity of participants with different academic profiles and from multiple nationalities makes up the multidisciplinary approach of this program, creating a valuable network of contacts that will be an added value for the future.





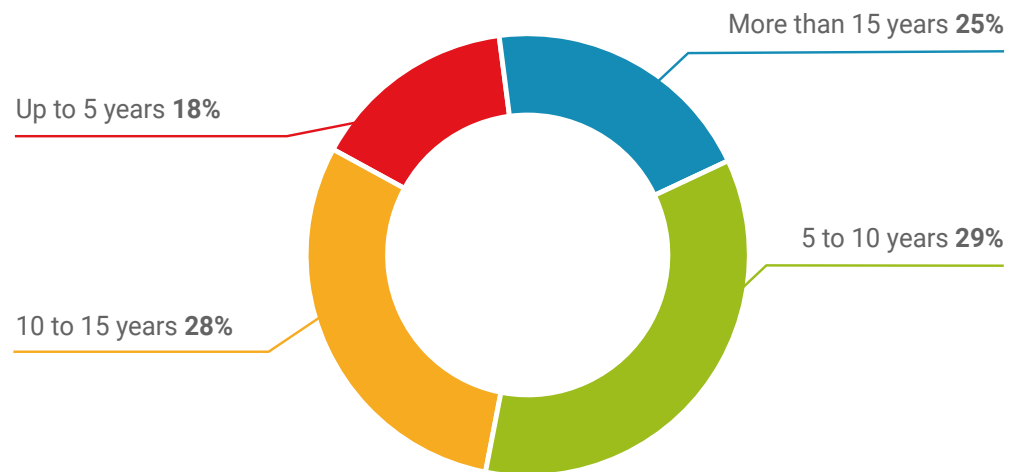
“

This program is intended for professionals with extensive experience who are looking to specialize in this field”

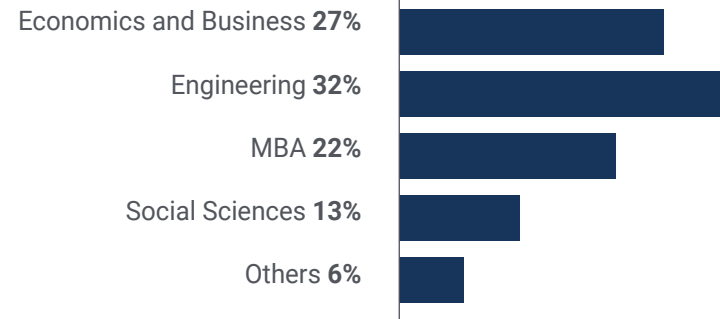
Average Age

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

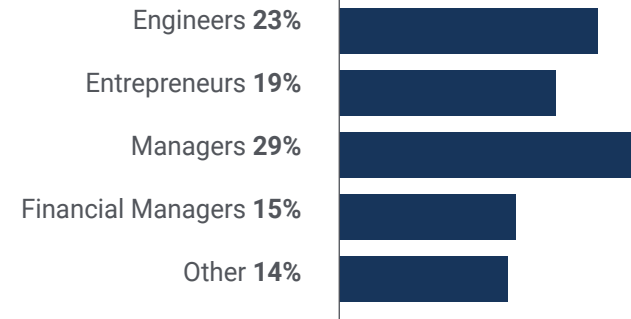
Years of Experience



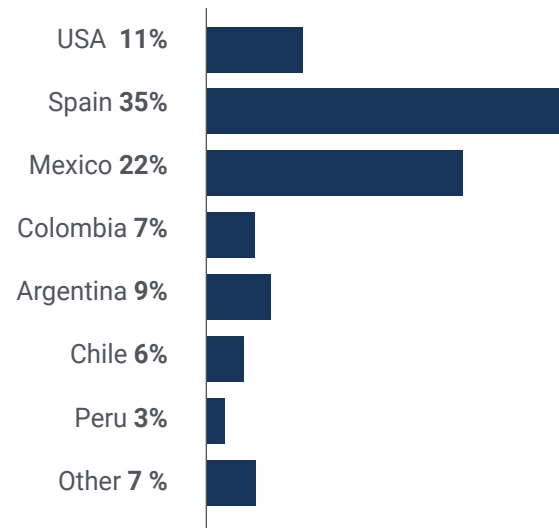
Training



Academic Profile



Geographical Distribution



Miguel Lozano

Manager of a multinational company

"The completion of this Advanced Master's Degree has been a quality plus addition to my repertoire improving my competitiveness and, above all, my skills in the management of industrial companies. In this way, TECH has offered me the perfect opportunity to continue studying while working, achieving an improvement not only on a professional level, but also on a personal level and giving me the necessary impetus to change jobs"

09

Course Management

The teaching staff of this Advanced Master's Degree of TECH Global University is composed of professionals with extensive experience who have compiled the latest information on the management of industrial companies and project management to provide students with the superior training that will be indispensable for their professional development. Undoubtedly, a unique opportunity to study alongside the best, getting up to date with first class advice.





“

*A unique teaching team that will help you
achieve professional success”*

Management



Dr. Asensi, Francisco Andrés

- ♦ D. in Industrial Engineering in Business Organization from the University of Castilla la Mancha (UCLM)
- ♦ Industrial Engineer in Industrial Organization from the Polytechnic University of Valencia
- ♦ He has worked in several areas, such as Engineering, Quality, Production, Logistics, Information Systems and HR, in companies of several industrial sectors
- ♦ He has implemented and developed a multitude of management systems for excellence (Quality, Scorecard, Lean Manufacturing, Continuous Improvement and Process Improvement) in several industrial companies
- ♦ Coach in Strategic Coaching
- ♦ Author of various business books "The Adaptive Enterprise", "LeanManufacturing: Key Indicators used to efficiently manage Continuous Improvement", "Lean Manufacturing: Keys to material flow improvement."
- ♦ Author of several books on Personal and Professional Development: "Total Leader", "Autocoaching".



Mr. Ruiz Cid, Martin Joaquín

- ♦ Technical Director EPC Projects Group- EPC Project Manager Leader at Soltec Energías Renovables
- ♦ Industrial Technical Engineer specializing in Mechanics/Structures from the Polytechnic University of Cartagena
- ♦ Industrial Engineer in Electricity from the Polytechnic University of Cartagena
- ♦ Official Master's Degree in Power Electronics and Adaptive Control
- ♦ MBA in Strategic Management of the Company by UNED
- ♦ Official Master's Degree in Renewable Energies and Environment
- ♦ Course in Project Manager Professional
- ♦ Turnkey EPC Project Management Course
- ♦ Course in Industrial Instrumentation

Professors

Ms. Aleixandre Andreu, María José

- ◆ Director of Commercial Banking of Caja del Mediterráneo and Banco Sabadell
- ◆ Diploma in Business Sciences from the UV
- ◆ II Office Managers Course, internal training. Caja de Ahorros del Mediterraneo, practical and theoretical training
- ◆ Internship Tutor at Politechnical University of Valencia
- ◆ Tutor of Internships at The University of Valencia
- ◆ 2-year course for office managers taught by Fundesem
- ◆ EPFA EFA Certification
- ◆ LCCI Certification from Carlos III University
- ◆ Technique and skills for trainers The Autonomous University of Barcelona

Mr. Del Olmo, Daniel

- ◆ Founder of Enira engineering S.L., with two products recognized as innovative in Industry 4.0 by official organizations (FactoryBI and Smart Extrusion)
- ◆ Industrial Engineering Degree, specializing in Electronics and Automation
- ◆ Professionally, he has worked mainly in multinational companies in the industrial automation and automotive sector as Plant Engineering Manager
- ◆ Toyota Production System (TPS) experience during 4 years of tenure at NHK Springs Co LTD. Japan, training received in Japan
- ◆ Lecturer in the MBA Master in Operations at the European University of Valencia

Mr. Giner Sanchis, David

- ◆ Portfolio and Program Manager in a Project Management Office (PMO). By monitoring compliance with BSC indicators and actions established for alignment with the company's strategy
- ◆ Chemical Engineer with a Master's Degree in Project Management from the Universidad Politécnica de Valencia and an Official Master's Degree in Project Management from the European University of Valencia
- ◆ 6+ years as a project manager in the industrial sector, monitoring and communicating progress against project/deployment plan, timeline and key milestones
- ◆ Has the following project certificates Management Professional (PMP), Project Management Office Certified Practitioner (PMO-CP), Agile Scrum Foundation y Design Thinking Professional Certificate (DTPC)
- ◆ Member of the PMI Valencia Chapter Board of Directors

Mr. Ibáñez Capella, Juan

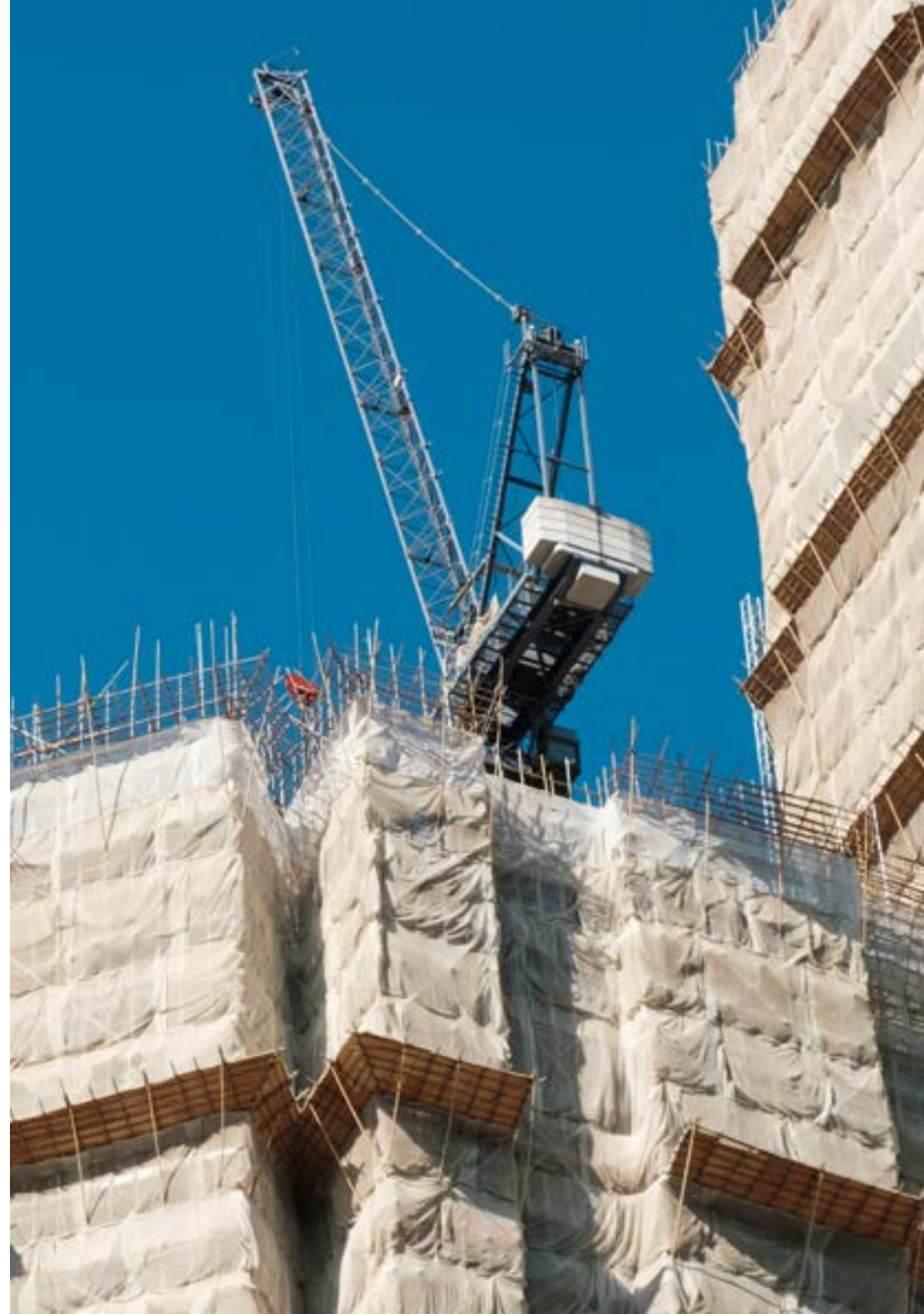
- ◆ Head of Facilities and Projects at Power Electronics in Valencia where he was in charge of the execution of the project for the new headquarters of the company with 50,000m² of floor space and 10,000m² of office space
- ◆ Industrial Engineer from the Polytechnic University of Valencia
- ◆ Executive MBA IESE Business School. Navarra University
- ◆ Project Manager Professional PMP® #2914541
- ◆ He has been responsible for Facilities Projects at Ferrovial
- ◆ He has participated in the execution of important projects such as: SOLMED galvanized steel plant in Sagunto (Valencia), works for the AVE high-speed train station in Zaragoza and works for the 32nd America's Cup in Valencia

Mr. Lucero Palau, Tomás

- ◆ Director of Operations, Quality, Engineering and Maintenance in several industrial and automotive companies
- ◆ Industrial Engineer from the Polytechnic University of Valencia
- ◆ MBA by ESTEMA Business School
- ◆ Expert in Lean Management, applied to various consultancy companies
- ◆ Speaker at the ABC of Operations and Logistics course at EDEM

Ms. Mollá Latorre, Korinna

- ◆ Responsible for international projects at AITEX, Instituto Tecnológico Textil, where she has acquired extensive experience in the management of large projects and teams related to textile materials and technologies, as well as operations, logistics and supply chain management in the textile industry
- ◆ Industrial Engineer, specialized in Industrial Organization from the Polytechnic University of Valencia
- ◆ Certified by the American Production and Inventory Control Society (USA) in Production and Inventory Management and in Integrated Resource Management
- ◆ Director of Operations and Logistics for Colortex, S.A. from 1993 to 2008, implementing a Lean Manufacturing system in the company's operations
- ◆ Project Technician for AIJU, Technological Institute of Toys (1992-1993)



Mr. Morado, Eduardo

- ◆ Industrial Engineer in Product Design from the UPV
- ◆ Quality Assurance at Ford Motor Company
- ◆ Implementation and leadership of engineering projects in manufacturing plants in the automotive and chemical sectors, for leading multinationals (Spain, UK, Germany, Mexico)
- ◆ Extensive experience as Key User and Trainer in the implementation of Quality, Safety and Environmental Management Systems (ISO, OSHAS, GMP), ERPs (SAP, Ross) and quality management tools (6-Sigma, FMEA, 8D, QCP), and as PM of engineering and maintenance, continuous and process improvement (TPM, R&M, APQP, LRR, PSM, SMED, Poka-Yoke...)
- ◆ Collaboration as a mentor for students at the UPV and in different initiatives of non-profit organizations and foundations for the promotion of STEM in young people between 6 and 18 years of age
- ◆ MBA and Upper Master's Degree in Occupational Risk Prevention

Mr. Navarra, Francisco

- ◆ Professional of Human Resources with more than 20 years of experience
- ◆ With a clear internal customer service orientation and adding value from and to add value in all areas of the sector
- ◆ More than 10 years working at ISTOBAL, providing experience in collective and individual bargaining; talent recruitment and retention; development of remuneration, compensation and benefits policies; and occupational risk prevention, including plans for the prevention of psychosocial risks

- ◆ Extensive communication and liaison skills with all levels of staff and management

Mr. Ruiz Cid, Martin Joaquín

- ◆ Technical Director EPC Projects Group- EPC Project Manager Leader at Soltec Energías Renovables
- ◆ Industrial Technical Engineer specializing in Mechanics/Structures from the Polytechnic University of Cartagena.
- ◆ Industrial Engineer in Electricity from the Polytechnic University of Cartagena
- ◆ Official Master's Degree in Power Electronics and Adaptive Control
- ◆ MBA in Strategic Management of the Company by UNED
- ◆ Official Master's Degree in Renewable Energies and Environment
- ◆ Course in Project Manager Professional
- ◆ Turnkey EPC Project Management Course
- ◆ Course in Industrial Instrumentation

Mr. Ponce Lucas, Miguel Enrique

- ◆ Responsible for various technical departments (Product Development, Advanced Engineering, Project Management, Innovation, Quality Management)
- ◆ Degree in Industrial Engineering (Mechanical) from the Universidad Politécnica De Valencia
- ◆ Development of the quality management system in accordance with ISO TS 16949 and IATF 16949
- ◆ Participation in patents for new products
- ◆ Development of the change management system
- ◆ Responsible for the global knowledge management system
- ◆ Development of the global engineering education system

10

Impact on Your Career

TECH Global University offers its students this Advanced Master's Degree in Senior Management in Industrial Companies, with which they will be able to make a radical change in their career. In this way, it is a unique option to improve at a professional level, achieving that superior training that will be fundamental to performing well in project management. And, in this way, to develop successfully in a booming sector that demands professionals with extensive experience and qualifications.



“

Thanks to this program you will be able to give the boost to your career that you have been looking for a long time. And you will get it thanks to the quality specialization offered by TECH"

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

The Advanced Master's Degree in Senior Management in Industrial Companies from TECH Global University is an intensive program that prepares the professional to face business challenges and decisions at both national and international levels. The main objective is to promote your personal and professional growth. Help you to achieve success.

Therefore, those who wish to improve themselves, achieve a Generating positive change at a professional level and interact with the best, will find their place at TECH.

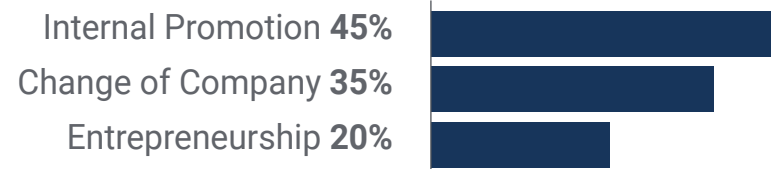
A unique academic opportunity that will allow you to turn your career around.

Achieve a promotion in your profession thanks to the superior training you will be able to acquire with this program.

When the change occurs



Type of change



Salary increase

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



11

Benefits for Your Company

This program on senior management in industrial companies will provide students with the necessary training to develop successfully in a sector that is becoming increasingly competitive, so that business professionals who take this Advanced Master's Degree will understand, thanks to the very complete syllabus, how the management of these types of projects should be carried out. Undoubtedly, this is a high-level program that will also benefit the companies in which the students work, as they will provide a new business vision.





“

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

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

01

Intellectual Capital and Talent Growth

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

02

Retaining high-potential executives to avoid talent drain

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

03

Building agents of change

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

04

Increased international expansion possibilities

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



05

Project Development

The management will be able to work on a real project or develop new projects in the field of R&D or Business Development of their company.

06

Increased competitiveness

This Advanced Master's Degree will equip students with the skills to take on new challenges and drive the organization forward.

12 Certificate

The Advanced Master's Degree in Senior Management in Industrial Companies guarantees, in addition to the most rigorous and update training, access to a Advanced Master's Degree issued by TECH Global University.





“

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

This program will allow you to obtain your **Advanced Master's Degree diploma in Senior Management in Industrial Companies** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Advanced Master's Degree in Senior Management in Industrial Companies**

Modality: **online**

Duration: **2 years**

Accreditation: **120 ECTS**



*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.



Advanced Master's Degree Senior Management in Industrial Companies

- » Modality: **online**
- » Duration: **2 years**
- » Certificate: **TECH Global University**
- » Credits: **120 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

Advanced Master's Degree Senior Management in Industrial Companies

