Advanced Master's Degree

Senior Management in Industrial Companies

AMDSMIC

tech technological university

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Advanced Master's Degree
Senior Management in Industrial Companies

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

Website: **www.techtitute.com/pk/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 Technological 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 Technological University

Innovation

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

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

The Highest Standards

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

95% | **of TECH students successfully complete their studies**

Networking

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

100,000+
executives trained each year

200+
different nationalities

Empowerment

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

500+ | **collaborative agreements with leading companies**

Talent

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

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

Multicultural Context

While studying at TECH, students will enjoy a unique experience. 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.

Learn with the best

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

Teachers representing 20 different nationalities.

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

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

Analysis

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

Academic Excellence

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

Economy of Scale

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

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 Technological 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:

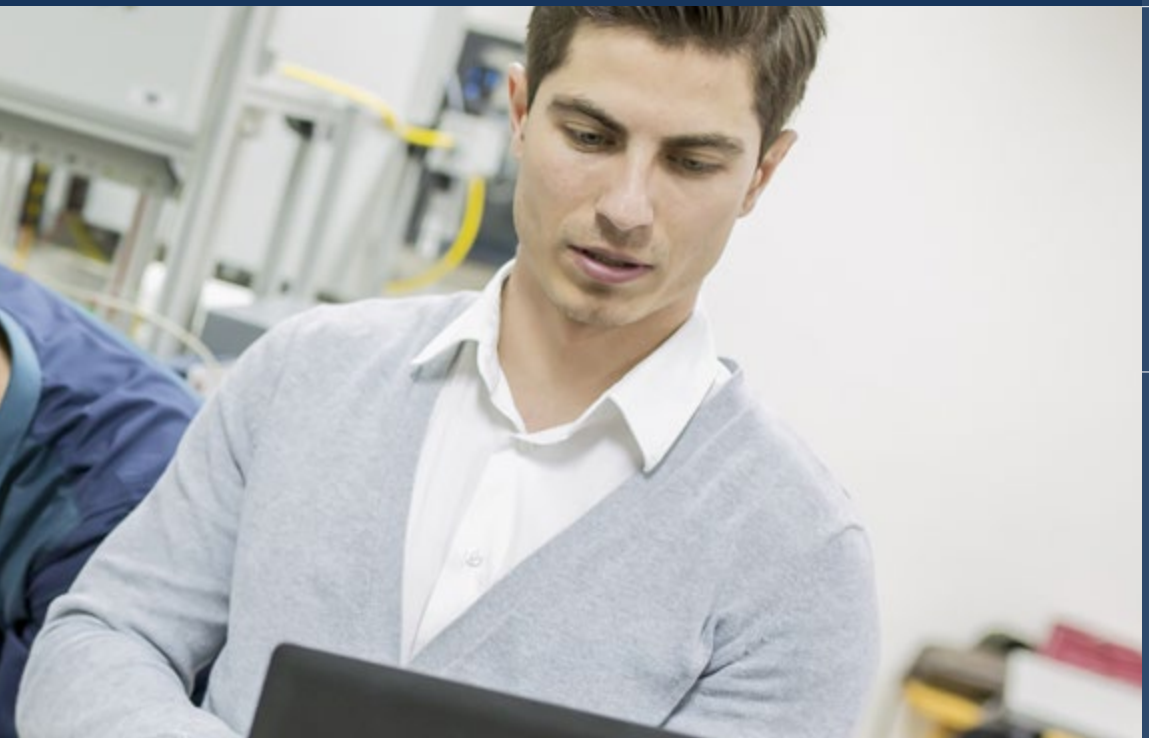
01 Implement and deploy the strategy throughout the organization using the balanced scorecard

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

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

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 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

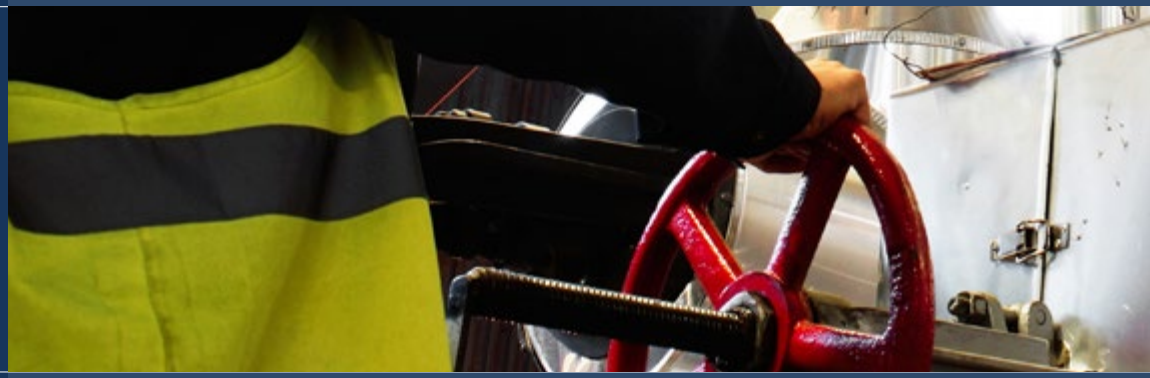
10 Know how to communicate design, development and management concepts of different engineering systems

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

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

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



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

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

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

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 Technological 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. 360º 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-businessand 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 SumContracts
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 betweenContract 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 Managementt 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 Managementand 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 Managementand 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 Managementin 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.

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

A learning method that is different and innovative

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

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

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

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

Relearning Methodology

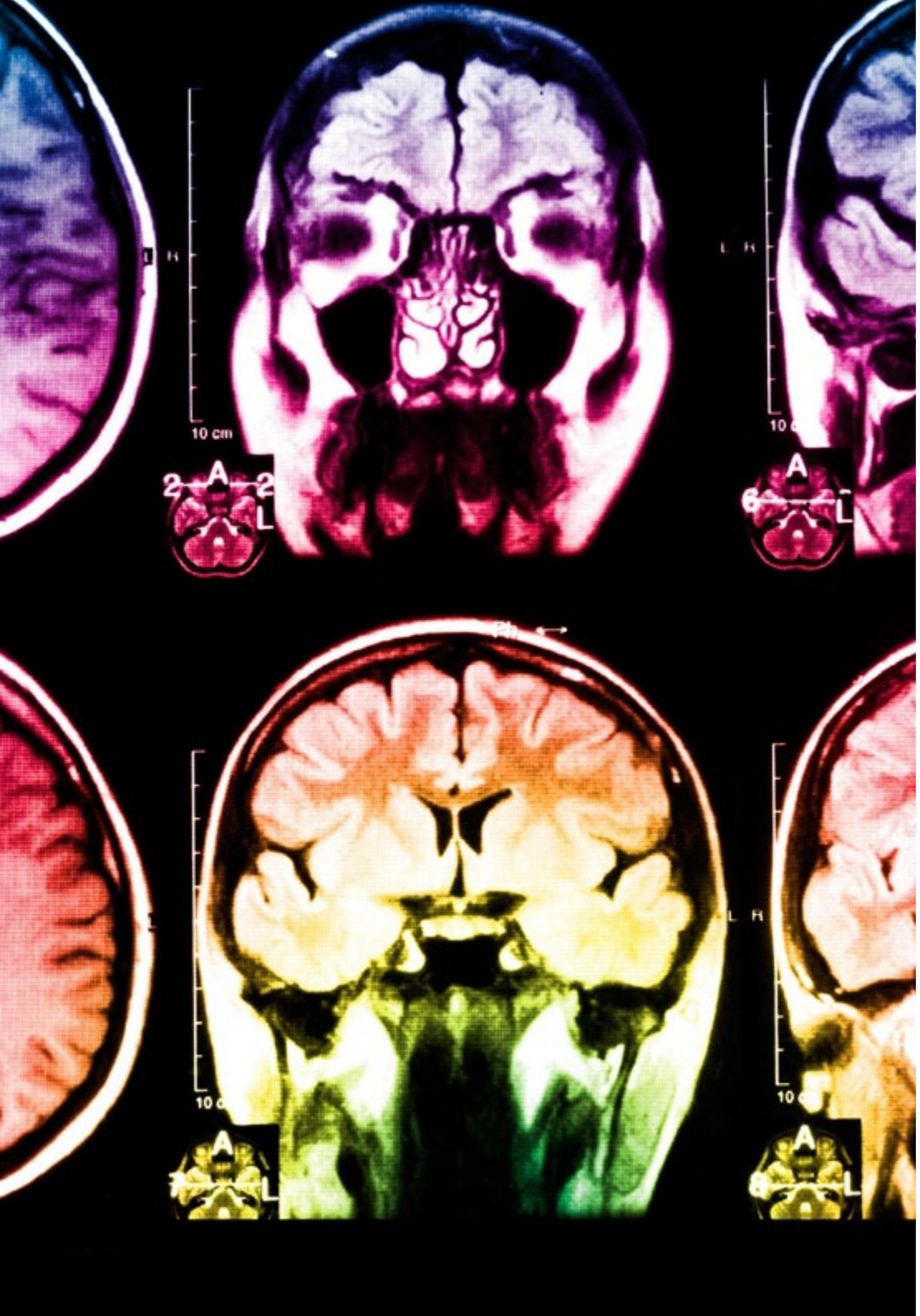
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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

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

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

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



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically. With this methodology we have trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, markets, and financial instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

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

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

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

Study Material

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

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

Classes

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

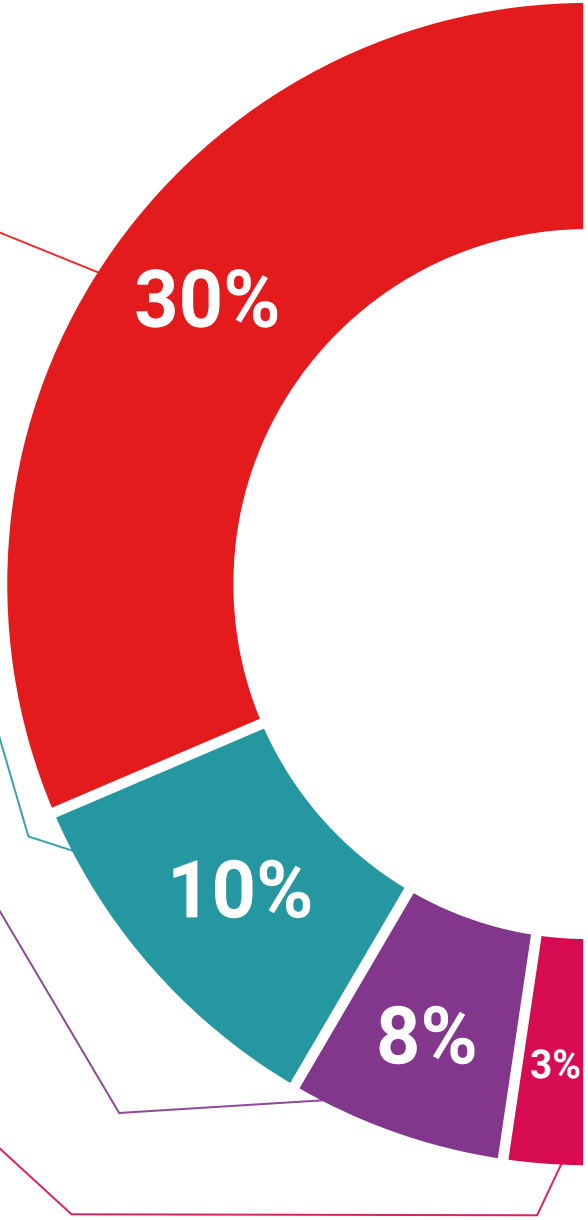
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

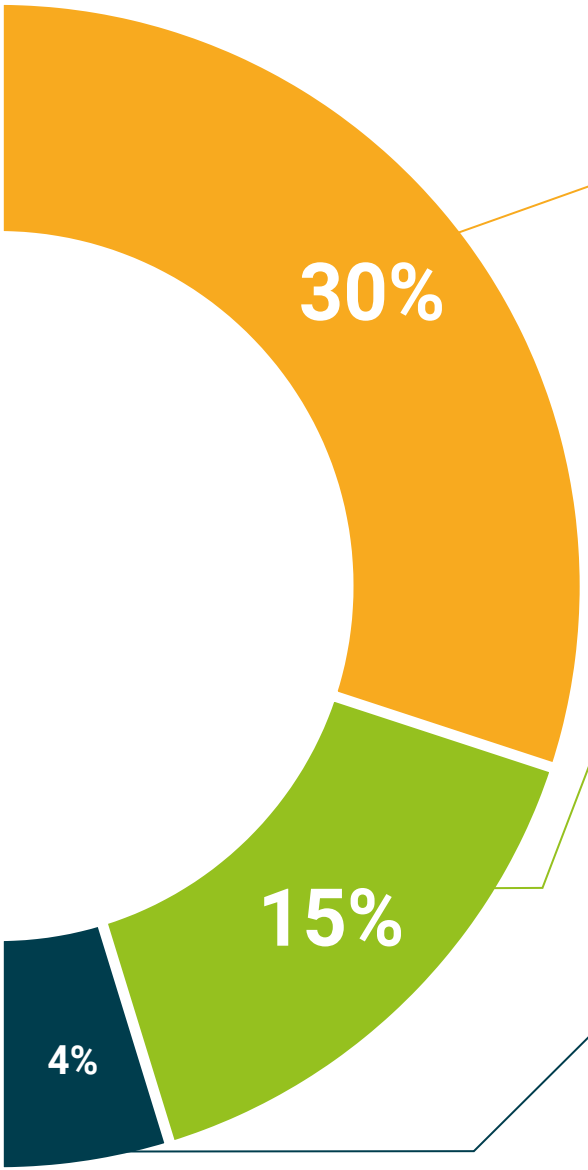
Management Skills Exercises

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

Additional Reading

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





Case Studies

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

Interactive Summaries

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

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

Testing & Retesting

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

08

Our Students' Profiles

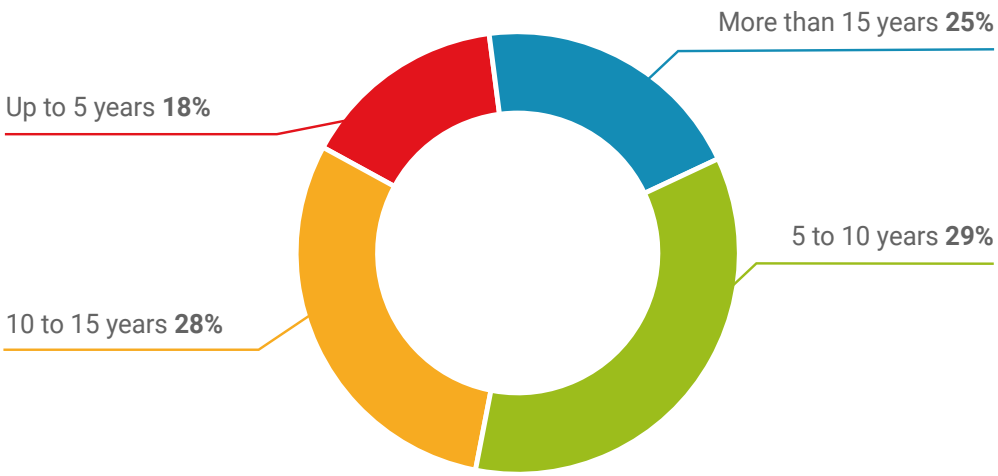
The Advanced Master's Degree in Senior Management in Industrial Companies is a program aimed at experienced professionals who want to update their knowledge and advance in their professional career, achieving that extra training that will allow them to excel in a highly competitive sector. In addition, 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"

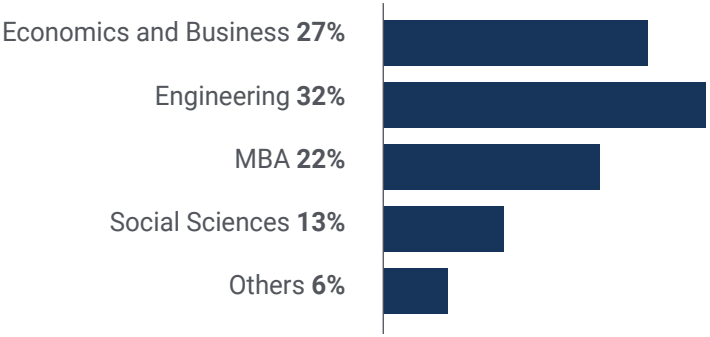
Average Age

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

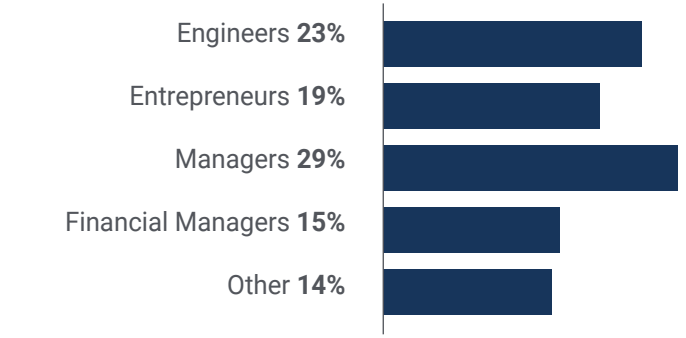
Years of Experience



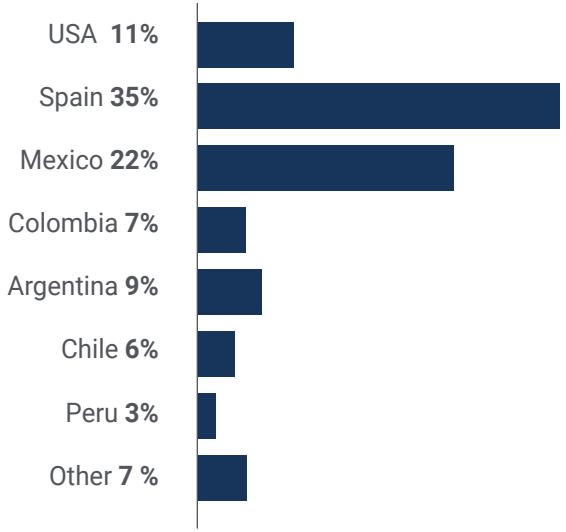
Training



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 Technological 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

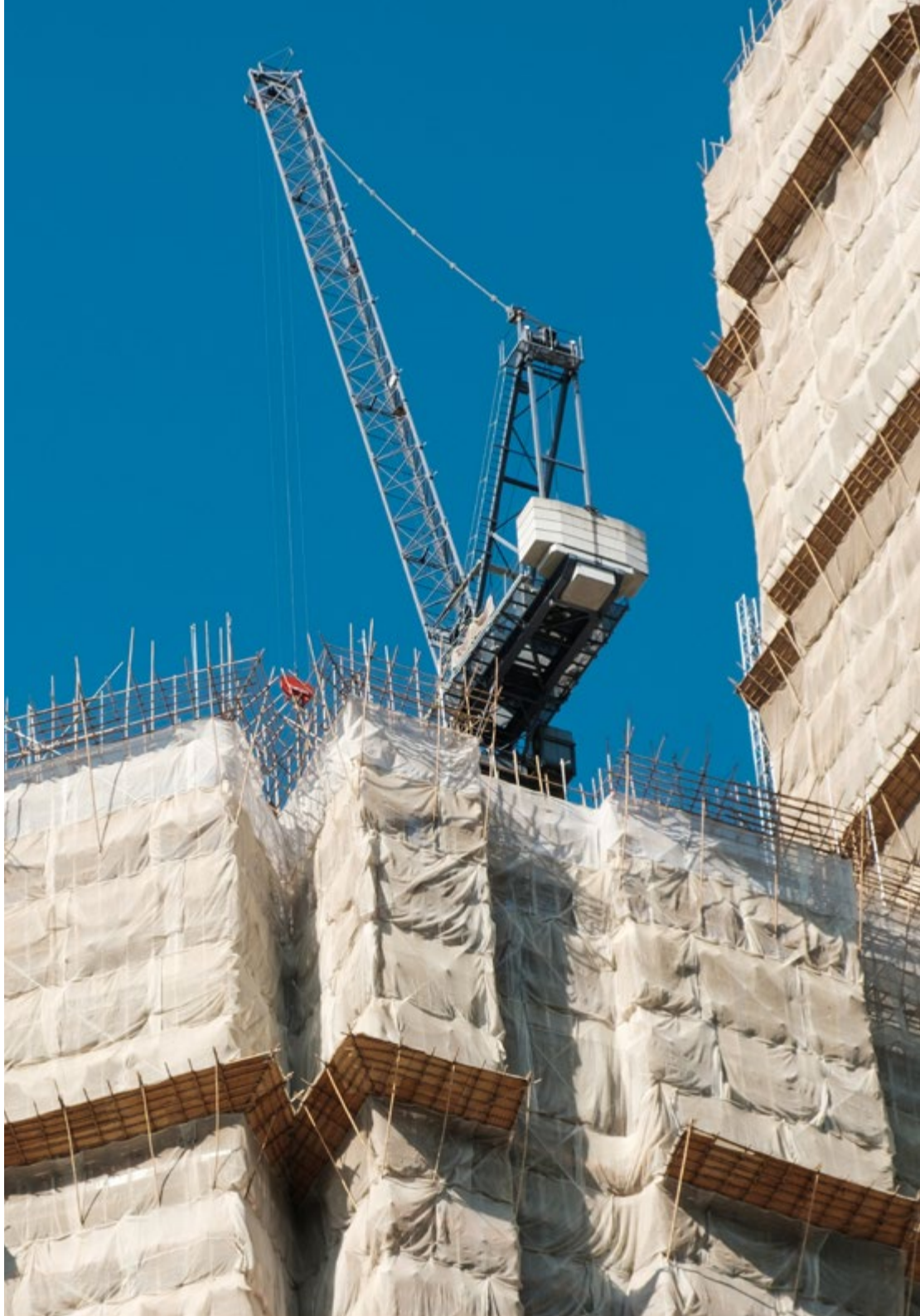
- Head of Facilities and Projects at Power Electronics in Valencia where he was in charge of the execution of the project for the new headquarters of the company with 50,000m2 of floor space and 10,000m2 of office space
- Industrial Engineer from the Polytechnic University of Valencia
- Executive MBA 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
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- 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 Technological 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 Technological 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.

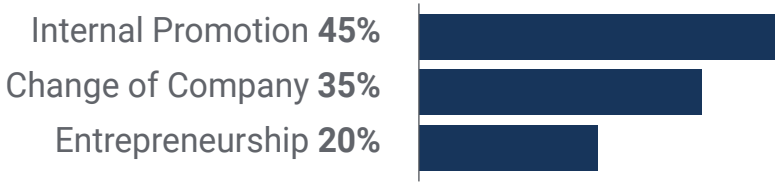
Therefore, those who wish to improve themselves, achieve a Generating positive change at a professional level and interact with the best, will find their place at TECH.

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 Technological University.

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

This **Advanced Master's Degree in Senior Management in Industrial Companies** contains the most complete and up-to-date program on the market.

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

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

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

Official N° of hours: **3,000 h.**


tech technological university

Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having successfully passed and accredited the following program

ADVANCED MASTER'S DEGREE

in

Senior Management in Industrial Companies

This is a qualification awarded by this University, equivalent to 3,000 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates


Advanced Master's Degree in Senior Management in Industrial Companies

General Structure of the Syllabus

Year	Subject	Hours	Type
1°	Strategic Keys to Improve Competitiveness	150	CO
1°	Project Management	150	CO
1°	Leadership and People Management	150	CO
1°	Corporate Finance An Economic-Financial Approach	150	CO
1°	Design and Product Development	150	CO
1°	Production Planning and Control	150	CO
1°	Lean Manufacturing	150	CO
1°	Quality Management	150	CO
1°	The Logistics Function, Key to Compete	150	CO
1°	Industry 4.0 and Business Intelligence The Digitized Company	150	CO
2°	International Projects	150	CO
2°	Turnkey Projects (EPC)	150	CO
2°	Management and Control of Stages in Turnkey Projects (EPC)	150	CO
2°	Contract Management in Projects	150	CO
2°	Risk Management in Contract Management	150	CO
2°	Project Management in Contract Management	150	CO
2°	Project Management in Projects: Scope and Schedule Management	150	CO
2°	Project Management in Projects: Communications and Quality Management	150	CO
2°	Project Management in Projects: Procurement and Resource Management	150	CO
2°	Project Management in Projects: Cost Management	150	CO

Tere Guevara Navarro
Dean

tech technological university

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

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Advanced Master's Degree
Senior Management in Industrial Companies

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

Advanced Master's Degree

Senior Management in Industrial Companies

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