



# **Executive Master's Degree**MBA in Industrial Management

» Modality: online

» Duration: 12 months

» Certificate: TECH Global University

» Credits: 60 ECTS

» Schedule: at your own pace

» Exams: online

» Target Group: engineers and graduates with experience who want to improve and update themselves in all the necessary aspects to be taken into account for an adequate management of an industrial company

Website: www.techtitute.com/us/school-of-business/professional-master-degree/master-mba-industrial-management

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# 01 **Welcome**

In an increasingly globalized world, where the competition between international companies is steadily increasing, it is necessary to work more efficiently and align all resources in order to achieve your planned objectives. Companies must use the best tools available to reach a competitive and efficient level of management and continually adapt to the needs of the market. This MBA in Industrial Management provides students with the skills and the knowledge needed to be capable of competing amongst the very best, achieving outstanding results for your business and, as a consequence, the successful career that is craved by serious professionals in the 21st century.









# tech 08 | Why Study at TECH?

### At TECH Global University



#### **Innovation**

The university offers an online learning model that balances 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.

+100000

+200

executives prepared each year

different nationalities



### **Empowerment**

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

+500

collaborative agreements with leading companies



#### **Talent**

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

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



### **Multicultural Context**

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

TECH students represent more than 200 different nationalities.



### 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 analyses in academia"

## Why Study at TECH? | 09 tech

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 (postgraduate learning methodology with the best international valuation) with the Case Study. Tradition and vanguard in a difficult balance, and in the context of the most demanding educational 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.





# tech 12 | Why Our Program?

This program will provide you with a multitude of professional and personal advantages, among which we highlight the following:



### A Strong Boost to Your Career

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 students achieve positive career development in less than 2 years.



# Develop a strategic and global vision of the company

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

Our global vision of companies will improve your strategic vision.



## 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.



### You will 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.



### 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.



### Thoroughly develop business projects.

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

20% of our students develop their own business idea.



### 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.



## You will be part of an exclusive community

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

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





# tech 16 | Objectives

# TECH makes the goals of their students their own goals too Working together to achieve them

The MBA in Industrial Management will equip you with the ability to:



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



Develop procedures and best practices in project management



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





Establish the relationship between project management and corporate strategy



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



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



Interpret a balance sheet to avoid future risks





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



Conduct a comprehensive analysis of the current business environment



Perform an 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



Achieve detailed knowledge production units work dynamics and functionality interaction



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



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





Gain in-depth knowledge of the fundamentals of lean thinking and its main differences with respect to traditional manufacturing processes



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



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



Develop different strategies to optimize the logistics function





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



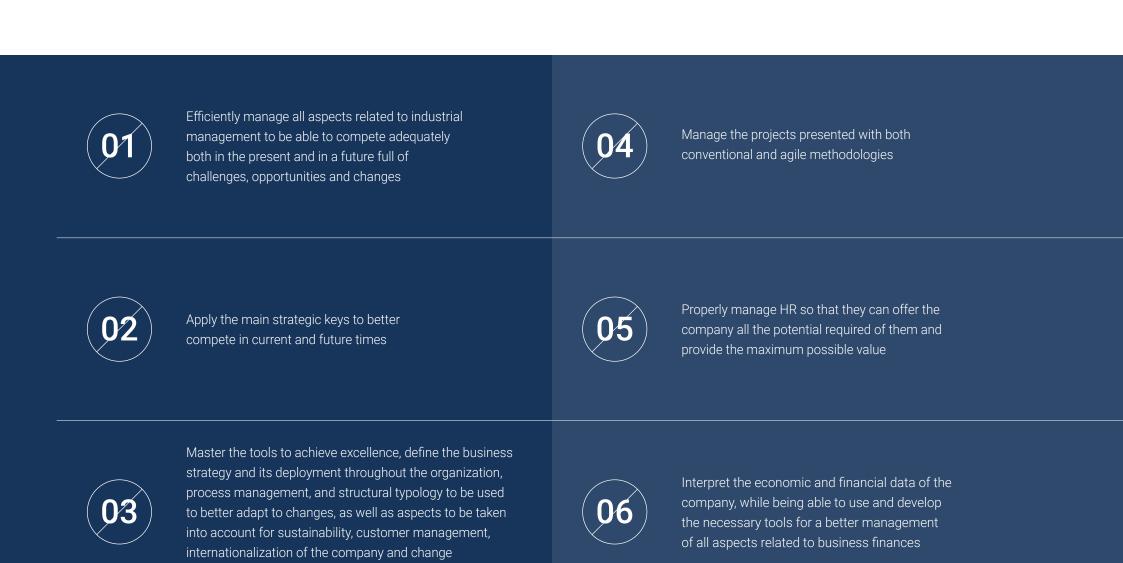
Perform an in-depth breakdown of the challenges of the logistics function, its key activities and associated costs, and deriving value from the logistics function and deep dive into the different types of supply chains



Learn more about the need for digital transformation suggested by the new business challenges to successfully face the near future







management, which is increasingly constant







# tech 26 | Structure and Content

### **Syllabus**

Today's globalized and highly competitive world has forced companies to establish highly efficient work environments that will allow them to achieve their objectives. To achieve this, companies must use the best tools available to them in order to reach a competitive and efficient level of management in order to be able to adapt to the best conditions

For this reason, it is essential that all professionals, even if they are only responsible for one area of the company, are aware of the impact their work can have on other areas and, above all, on the customer. In other words, they must have transversal knowledge.

That's why this Executive Master's Degree goes deeper into all aspects related to industrial management, and provides a more complete overview which enables better decision-making. To this end, the program relies on great professionals of recognized prestige who have in-depth knowledge and extensive experience in the sector to provide students with the key information.

The course content combines theoretical aspects with an eminently practical approach that leaves students with a deeper understanding of the inner workings of an industrial company.

In this way, students will gain the capacity and tools necessary to efficiently manage all aspects related to industrial management, in order to be able to compete adequately both in the present and in a future full of challenges, opportunities and changes.

Our teachers' wealth of knowledge in their field of management within the industry, adds a level of quality to the program and not only does it link it to the day-to-day reality within this profession but also provides an insider's vision of how best to adapt to the future. All of these factors have led to the creation of a table of contents which has been specially designed to reflect the reality of the profession and the tools that every professional should master in order to adequately face the continuous changes that they have to deal with.

This program will enable professionals to update and specialize themselves placing them at the forefront of the latest developments in their sector of expertise.

| Module 1  | Strategic Tips to Improve Competitiveness                     |
|-----------|---|
| Module 2  | Project Management  |
| Module 3  | Leadership and People Management                              |
| Module 4  | Corporate Finance. An Economic-Financial Approach             |
| Module 5  | Product Design and 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 |



### Where, when and how is it taught?

TECH offers you the possibility of taking this program completely online. Over the 12 months of the program, you will be able to access all the contents of this program at any time, allowing you to self manage your study time.

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

# tech 28 | Structure and Content

# Module 1. Strategic Tips to Improve Competitiveness1.1. Excellence in Today's Business1.2. Des

- 1.1.1. Adaptation to VUCA Environments
- 1.1.2. Satisfaction of Stakeholders
- 1.1.3. World Class Manufacturing
- 1.1.4. Measurement of Excellence:
  Net Promoter Score

- 1.2. Design of Business Strategy
- 1.2.1. General Strategy Definition Process
- 1.2.2. Definition of the Current Situation Positioning Models
- 1.2.3. Possible Strategic Moves
- 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 of Action
- 1.3.2. Need for a Balanced Scorecard
- 1.3.3. Perspectives to Be Used in CMI
- 1.3.4. Strategic Map
- 1.3.5. Phases to Implement a Good CMI
- 1.3.6. General Map of CMI

#### 1.4. Process Management

- 1.4.1. Process Description
- 1.4.2. Types of Processes. Main Processes
- 1.4.3. Process Prioritization
- 1.4.4. Process Representation
- 1.4.5. Measuring Processes for Improvement
- 1.4.6. Business Process Mapping
- 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 Business
- 1.5.4. Characteristics and Key Factors of Agile Organizations (RRA)
- 1.5.5. The Organizations of the Future: The TEAL Organization

#### 1.6. Business Model Design

- 1.6.1. Canvas Model for Business Model Design
- 1.6.2. Lean Startup 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 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. Customer Management Elements
- 1.8.3. Technology and Customer Management CRM

# 1.9. Management in International Environments

- 1.9.1. The Importance of Internationalization
- 1.9.2. Export Potential Diagnosis
- 1.9.3. Elaboration of the Internationalization 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

| Mod              | Module 2. Project Management   |                                    |  |                                    |  |                  |  |  |
|------------------|--|------------------------------------|--|------------------------------------|--|------------------|--|--|
| 2.1.2.           | Fundamental Project Components   | 2.2.<br>2.2.1.<br>2.2.2.<br>2.2.3. | Project Scope Management Scope Analysis Project Scope Planning Project Scope Control   | 2.3.<br>2.3.1.<br>2.3.2.<br>2.3.3. | Project Schedule   | 2.4.2.<br>2.4.3. | Cost Management Project Cost Analysis Financial Project Selection Project Cost Planning Project Cost Control |  |
| 2.5.2.           | Quality, Resources and Procurement Total Quality and Project Direction Project Resources Acquisition. Recruitment System | 2.6.2.                             | Project Stakeholders and<br>Communications<br>Importance of Stakeholders<br>Project Stakeholders Management<br>Project Communication | 2.7.<br>2.7.1.<br>2.7.2.<br>2.7.3. | Fundamental Principles in Risk Management<br>Process Management for Project Risk<br>Management |                  | 9 9 9  |  |
| 2.9.2.<br>2.9.3. | Agile Methodologies I: Scrum Agile and Scrum Principles Scrum Team Scrum Events Scrum Artifacts                          | 2.10.1<br>2.10.2                   | Agile Methodologies II: Kanban  Kanban Principles Kanban and Scrumban Certifications   |                                    |  |                  |  |  |

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3.9.1. George Odiorne-4 Box Matrix

Talent Outcomes

3.9.3. Strategic Actions to Achieve Effective

3.9.2. 9-Box Matrix

#### Module 3. Leadership and People Management 3.1. The Role of the Leader 3.2. Team Motivation 3.3. Communication and Conflict 3.4. Emotional Intelligence in People 3.1.1. Leadership in Effective People Management 3.2.1. Needs and Expectations Resolution Management 3.1.2. Types of Decision-Making Style in People 3.2.2. Effective Recognition 3.3.1. Intelligent Communication 3.4.1. Emotion, Feelings and Mood Management 3.2.3. How Can Team Cohesion Be Strengthened? 3.3.2. Constructive Conflict Management 3.4.2. Emotional Intelligence 3.1.3. The Coach Leader 3.3.3. Conflict Solving Strategies 3.4.3. Ability Model (Mayer and Salovey): 3.1.4. Self-Directed Teams and Empowerment Identify, Use, Understand and Manage 3.4.4. Emotional Intelligence and Personnel Recruitment 3.5. Indicators in People Management 3.6. Performance Evaluation 3.8. Identification of Potential 3.7. Training Plan 3.5.1. Productivity 3.6.1. Performance Assessment Components 3.7.1. Fundamental Principles 3.8.1. Potential 3.7.2. Identification of Training Needs 3.8.2. Soft Skills as a Key High-Potential Initiator 3.5.2. Staff Turnover and Cycle 3.5.3. Talent Retention Rate 3.6.2. 360° Assessment 3.7.3. Training Plan 3.8.3. Methodologies for Identifying Potential: 3.6.3. Performance Management: A Process 3.7.4. Training and Development Indicators Learning Agility Assessment (Lominger) 3.5.4. Staff Satisfaction Rate 3.5.5. Average Time of Unfilled Vacancies and Growth Factors and a System 3.5.6. Average Training Time 3.6.4. Management by Objectives 3.6.5. Operation of the Performance Assessment 3.5.7. Average Time to Achieve Goals 3.5.8. Absenteeism Levels Process 3.5.9. Occupational Accidents 3.10. Talent Development Strategy 3.9. Talent Map

and ROI

3.10.3. Talent ROI

3.10.1. 70-20-10 Learning Model for Soft Skills

3.10.2. Career Paths and Succession

| 4.1.1. Product<br>4.1.2. The Cor       | tion Costs mpany in Competitive Markets olistic Competition  | <b>4.2.</b> 1.4.2.2.4.2.3. | Analysis of Financial Statements I:<br>the Balance Sheet<br>Assets. CP and LP Resources<br>Liabilities. Obligations to CP and LP<br>Shareholders' Equity. Shareholder Returns      |        | Analysis of Financial Statements II:<br>the Income Statement<br>The Structure of the Income Statement.<br>Revenues, Costs, Expenses and Result<br>Main Ratios to Analyze the Income Statement<br>Profitability Analysis | <b>4.4.</b> 1. 4.4.2. 4.4.3. 4.4.4. | Impact and Management of Cash Deficits/<br>Surplus. Corrective Actions   |
|--|--|----------------------------|--|--------|---|-------------------------------------|--|
| 4.5.1. Financir<br>4.5.2. Financir     | res of Financing to CP and LP<br>ing to CP, Tools<br>ing to LP, Tools<br>of interest and Their Structure |                            | Interaction between the Company<br>and the Bank<br>The Financial System and the Banking<br>Business<br>Banking Products for the Company<br>The Company Analyzed by the Bank        | 4.7.1. | Analytical or Cost Accounting Types of Costs Decisions Based on Costs Full Costing Direct Costing Cost Model Based on Centers and Activities  | <b>4.8.</b> 4.8.1. 4.8.2. 4.8.3.    | Investment Analysis and Valuation The Company and Investment Decisions. Scenarios and Situations Investment Valuation Valuation of Companies |
| 4.9.1. Capital 4.9.2. Dissolut of Comp | nations of Companies: Mergers and  | 4.10.1<br>4.10.2<br>4.10.3 | Foreign Trade Finance  Foreign Markets: The Decision to Export  The Foreign Exchange Market  International Payment and Collection Methods  Transportation, Incoterms and Insurance |        |   |                                     |  |

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5.9.3. Lessons Learned and Practices Tested

5.9.4. Process of Change

#### Module 5. Product Design and Development 5.1. QFD (Quality Function Deployment) 5.2. Design Thinking 5.3. Concurrent Engineering 5.4. Programming. Planning and Design, Need, Technology and Strategy 5.3.1. Fundamentals of Concurrent Engineering in Product Design and Development Definition 5.2.2. Stages of the Process 5.3.2. Methodology of Concurrent Engineering 5.1.1. From the Voice of the Customer to Technical 5.4.1. Requirements. Quality Management 5.2.3. Tools and Techniques Used 5.3.3. Tools Used 5.4.2. Development Phases. Time Management Requirements 5.1.2. The House of Quality/Phases for its 5.4.3. Materials, Feasibility, Processes. Cost Development Management 5.4.4. Project Equipment. Human Resource 5.1.3. Advantages and Limitations Management 5.4.5. Information. Communications Management 5.4.6. Risk Analysis. Risk Management 5.5. Products. Their Design (CAD) Prototypes. Their Development 5.7. Productive Process. Design 5.8. Product and Process. Its Validation 5.6.1. Rapid Prototyping and Development and Development 5.8.1. Evaluation of Measurement Systems 5.6.2. Control Plan 5.8.2. Validation Tests 5.7.1. Modes and Effects of Process Failure 5.5.1. Information Management /PLM / Product 5.8.3. Statistical Process Control (SPC) 5.6.3. Experiment Design Life Cycle 5.7.2. Design and Construction of Manufacturing 5.6.4. The Analysis of Measurement Systems 5.8.4. Product Certification 5.5.2. Modes and Effects of Product Failure 5.5.3. CAD Construction. Review 5.7.3. Design and Construction of Control 5.5.4. Product and Manufacturing Plans Tools (Gauges) 5.5.5. Design Verification 5.7.4. Adjustment Phase 5.7.5. Production Start-Up 5.7.6. Initial Evaluation of the Process 5.9. Change Management. 5.10. Innovation and Technology Improvement and Corrective Transfer 5.10.1. Intellectual Property Actions 5.10.2. Innovation 5.9.1. Type of Change 5.10.3. Technological Transfer 5.9.2. Variability Analysis, Improvement

| Mod   | ule 6. Production Planning and Contro   | ]                          |   |                                  |   |        |  |
|---|---|----------------------------|---|----------------------------------|---|--------|--|
| <b>6.1.</b> 6.1.1. 6.1.2. 6.1.3. 6.1.4. 6.1.5. 6.1.6. | Sales Projections, Methods<br>Definition of Takt-Time<br>Material Plan-MRP-Minimum Stock            | 6.2.1.<br>6.2.2.<br>6.2.3. | Performance Development Plan<br>(PDP)<br>Factors to Consider<br>Push Planning<br>Pull Planning<br>Mixed Systems   | <b>6.3.</b> 6.3.1. 6.3.2. 6.3.3. | Kanban<br>Types of Kanban<br>Uses of Kanban<br>Autonomous Planning: 2 Bin Kanban                          | 6.4.2. | Production Control  PDP Deviations and Reporting Monitoring of Performance in Production: OEE Monitoring of Total Capacity: TEEP |
| <b>6.5.</b> 6.5.1. 6.5.2. 6.5.3. 6.5.4.               | Production Organization Production Equipment Engineering Processes Maintenance Control of Materials |                            | Total Productive Maintenance (TPM)  Corrective Maintenance Autonomous Maintenance Preventative Maintenance Predictive Maintenance Maintenance Efficiency Indicators MTBF-MTTR |                                  | Plant Layout Conditioning Factors Online Production Production in Work Cells Applications SLP Methodology |        | Just-In-Time (JIT)  Description and Origins of JIT  Objectives  Applications of JIT. Product Sequencing                          |
| <b>6.9.</b> 6.9.1. 6.9.2. 6.9.3.                      |   | 6.10.1<br>6.10.2           | Quick Response Manufacturing (QRM)  Description Key Points for the Structuring Implementation of the QRM  |                                  |   |        |  |

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#### 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 vs. 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. The Lean Thinking Process

#### 7.3. The 5 S'

- 7.3.1. The 5S Principles and How They Can Help Us Improve Productivity
- 7.3.2. The 5 S' Seiri, Seiton, Seiso, Seiketsu and Shitsuke
- 7.3.3. Implementation of the 5S 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 Maps)
- 7.4.3. Process Activity Mapping
- 7.4.4. Mapping of Supply Chain Response
- 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. Physical Structure Mapping

#### 7.5. Lean Operational Tools

- 7.5.1. SMED
- 7.5.2. JIDOKA
- 7.5.3. POKAYOKE
- 7.5.4. Batch Reduction
- 7.5.5. POUS

# 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. Manufacturing in Cells

# 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 for Implementing Kaizen

#### 7.8. Roadmap for Lean Implementation

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

# 7.9. Lean Performance Measurement KPIs

- 7.9.1. OEE- Overall Equipment Efficiency
- 7.9.2. TEEP-Total 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-Programmed Manufacturing
- 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. DR-Delivery Rate
- 7.9.11. IFA-Accident Frequency Rate

# 7.10. Lean's Human Dimension Staff Participation Systems

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

| Module 8. Quality Management                             |  |                                      |   |                                    |  |  |  |
|--|--|--------------------------------------|---|------------------------------------|--|--|--|
| <b>8.1.</b> 8.1.1. 8.1.2. 8.1.3. 8.1.4.                  | Quality Costs                                  | 8.2.2.<br>8.2.3.<br>8.2.4.<br>8.2.5. | ISO 9001:15 Quality Management System The 7 Principle of ISO 9001:15 Quality Management Process Approach ISO 9001: 9001 Requirements Implementation Stages and Recommendations Deployment of Targets in a Hoshin-Kanri Type Model Audit Certification | 8.3.<br>8.3.1.<br>8.3.2.<br>8.3.3. | 14000  |  | EFQM Model EFQM Model: Principles and Fundamentals New EFQM Model Criteria   |
| <b>8.5.</b> 8.5.1. 8.5.2. 8.5.3.                         | Statistical Process Control (SPC)              | 8.6.2.<br>8.6.3.<br>8.6.4.           | Advanced Tools and<br>Troubleshooting Tools<br>FMEA<br>8D Report<br>The 5 Whys<br>5W + 2H<br>Benchmarking   | 8.7.1.<br>8.7.2.<br>8.7.3.         | Applying PDCA Cycle to Lean<br>Manufacturing Development |  | Continuous Improvement Methodology II: Six Sigma Six Sigma Description Six Sigma Principles Six Sigma Project Selection Six Sigma Project Stages: DMAIC Methodology Six Sigma Roles Six-Sigma and Lean Manufacturing |
| 8.9.   | Quality Suppliers: Audits Tests and Laboratory | 8.10                                 | Organization Aspects in Quality  Management   |                                    |  |  |  |
| 8.9.1.<br>8.9.2.<br>8.9.3.<br>8.9.4.<br>8.9.5.<br>8.9.6. | Reception Quality: Agreed Quality              | 8.10.2                               | . The Role of Administration in Quality<br>Management<br>2. Quality Area Organization and the<br>Relationship with Other Areas<br>3. Quality Circles  |                                    |  |  |  |

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#### Module 9. The Logistics Function, Key to Compete

#### 9.1. Logistical Function 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 Logistics Activities. How to Derive Value from the Logistics Function
- 9.1.4. Types of Supply Chains
- 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. The Management of a Warehouse
- 9.4.3. Stocks Management
- 9.4.4. Types of Warehouses
- 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 Logistics vs. **External Logistics**
- 9.5.2. The Traditional Relationship with Suppliers
- 9.5.3. The New Supplier Relationship Paradigm
- 9.5.4. How to Classify and Select our Suppliers
- 9.5.5. How to Develop an Effective Procurement Management

#### 9.6. Logistics Information and Control **Systems**

- 9.6.1. Requirements of a Logistical Information and Control System
- 9.6.2. 2 Types of Logistic Information and Control Systems
- 9.6.3. Application of Big Data in Logistical 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 Logistics Flows vs. Direct
- 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 Logistics Strategies

- 9.8.5. E-Business and New Distribution Models

#### 9.9. Benchmarking of Supply Chains

- 9.9.1. Common Features of Successful Value Chains
- 9.9.2. Analysis of the Inditex Group's Value Chain
- 9.9.3. Analysis of Amazon's Value Chain

#### 9.10. The Logistics of the Pandemic

- 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

- 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
- 9.8.6. The Importance of Last Mile Logistics

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

#### 10.1. Automation and Industrial Robotics

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

#### 10.2. Process Automation: RPA

- 10.2.1. Administrative Processes that Can Be Automated
- 10.2.2. Software Structure
- 10.2.3. Application Examples

# 10.3. MES, SCADA, CMMS, WMS, MRPII Systems

- 10.3.1. Production Control with MES Systems
- 10.3.2. Engineering and Maintenance: SCADA AND CMMS
- 10.3.3. Procurement and Logistics: WMS and MPRII

#### 10.4. Business Intelligence Software

- 10.4.1. BI Fundamentals
- 10.4.2. Software Structure
- 10.4.3. Possibilities of Its Implementation

#### 10.5. Software ERP

- 10.5.1. ERP Description
- 10.5.2. Scope of Use
- 10.5.3. Main ERP on the Market

#### 10.6. IoT and Business Intelligence

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

#### 10.7. Main BI Software on the Market

- 10.7.1. Power BI 10.7.2. Olik
- 10.7.3 Tableau

#### 10.8. Microsoft Power Bi

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

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

- 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. Marketing and Sales Applications



A unique, key, and decisive academic experience to boost your professional development and take the definitive leap"



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.





# tech 40 | Methodology

# 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.





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.

# tech 42 | Methodology

#### **Relearning Methodology**

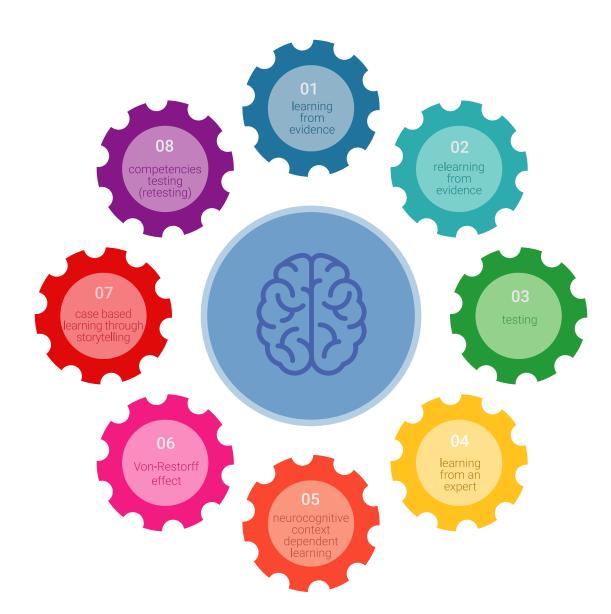
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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.



## Methodology | 43 tech

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.



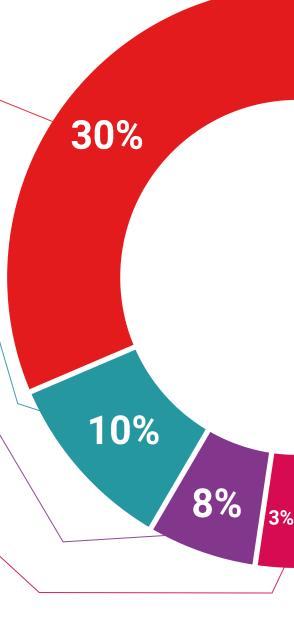
#### **Management Skills Exercises**

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.



# Methodology | 45 tech



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**



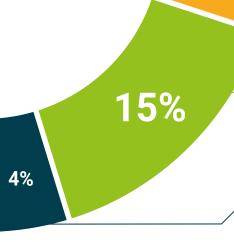
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.

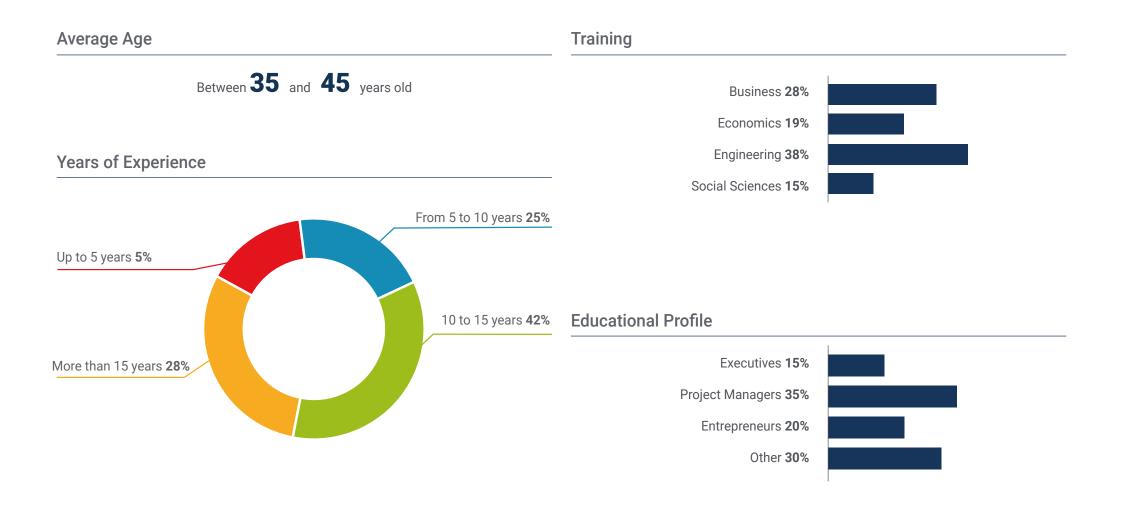


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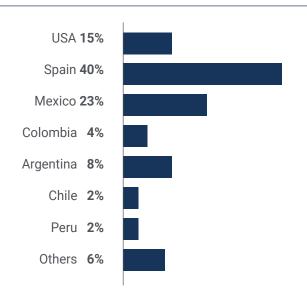




# tech 48 | Our Students' Profiles



#### **Geographical Distribution**





# Adriana Sánchez

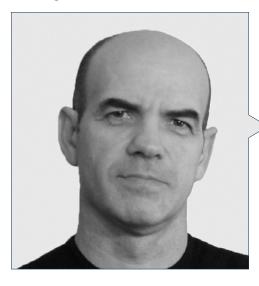
#### Project manager

"Thanks to this Executive Master's Degree, I have been able to expand my knowledge in an area which is fundamental to my professional development. It has undoubtedly been a unique opportunity to master new techniques, improve my daily practice and achieve a deeper understanding of the role"





#### Management



#### Dr. Asensi, Francisco Andrés

- PhD in Industrial Engineering in Business Organization from the University of Castilla la Mancha (UCLM)
- Degree in Industrial Organization Engineering from the Polytechnic University of Valencia
- He has worked in several areas, such as Engineering, Quality, Production, Logistics, Information Systems and Human Resources, 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 of Strategic Coaching
- Author of various business books: "The Adaptive Enterprise", "Lean Manufacturing: 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", "self-coaching"

#### **Professors**

#### Ms. Mollá Latorre, Korinna

- Responsible for international projects at AITEX, Textile Technological Institute, where
  she has acquired extensive experience in the management of teams and large projects
  in connection with 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 AlJU, Technological Institute of Toys (1992-1993)

#### 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
- MBA in Industrial Management. IESE Business School. Navarra University
- Project Manager Professional PMP® #2914541
- He has been responsible for facilities projects for the company Ferrovial
- He has participated in the execution of important projects such as: SOLMED galvanized steel plant in Sagunto (Valencia), participation in the works of the AVE Station in Zaragoza and in the works of the 32nd edition of the America's Cup in Valencia

#### 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 Polytechnic University of Valencia
- Development of the quality management system according to ISO TS 16949 and IATF 16949
- Participation in new product patents
- Development of change management system
- Responsible for the global knowledge management system
- Developed the engineering specialization system globally

#### Mr. Navarro Jarque, Francisco

- Human Resources professional with more than 20 years of experience, with an academic specialization in psychology. He has a clear focus on internal customer service and providing value from all areas
- More than 10 years working in 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
- During his career he has developed the necessary skills to adapt HR actions to changing situations and complex environments
- Expert in Lean Management, applied in several companies as a consultant

# tech 54 | Course Management

#### Mr. Giner Sanchis, David

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

#### Mr. Del Olmo, Daniel

- Founder of Enira Engineering S.L. in 2018, with two products recognized as innovative in Industry 4.0 by official bodies (FactoryBI y Smart Extrusion)
- Specialization in Industrial Engineering, specializing in Electronics and Automation
- Professionally, he has worked mainly in multinational companies in the industrial automation and automotive sector as Plant Engineering Manager
- Has experience at Toyota Production System (TPS) during 4 years at NHK Springs Co LTD.
   Japan, specialization received in Japan
- Lecturer in the MBA Master in Operations at the European University of Valencia (2018)

#### Ms. Aleixandre Andreu, María José

- Diploma in Business Studies from the UV
- Course on office managers, internal specialization Caja de Ahorros del Mediterráneo, practical and theoretical specialization
- Internship tutor, Polytechnic University of Valencia. Years 1998 to 2005
- Internship tutor, University of Valencia years 1998 to 2007
- 2-year course for office managers given by Fundesem
- EFA Certification from the EPFA
- LCCI Certification at Carlos III University
- Course on techniques and skills for trainers at the Autonomous University of Barcelona, October 2019
- Commercial Banking Director at the Caja del Mediterráneo and Sabadell Bank

#### Mr. Lucero Palau, Tomás

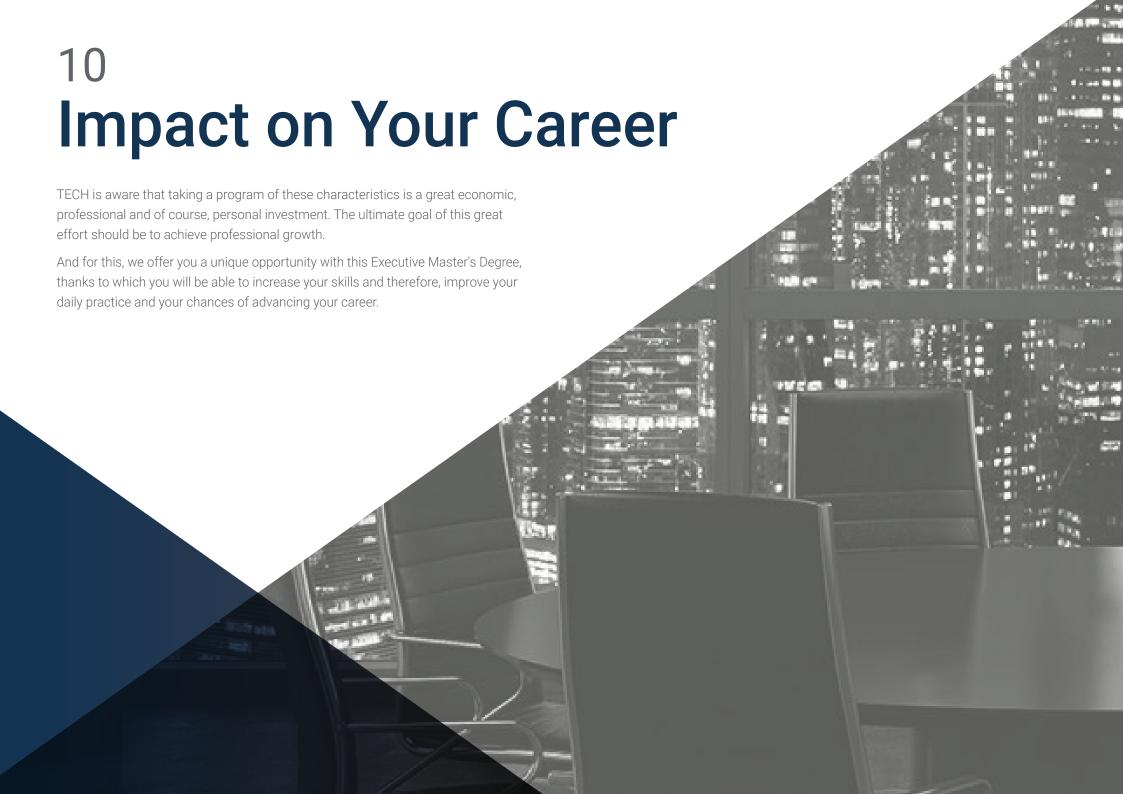
- Director of operations, quality, engineering and maintenance in several industrial and automotive companies
- Industrial Engineering degree from the Polytechnic University of Valencia
- MBA from ESTEMA Business School
- Speaker at the ABC of Operations and Logistics course at EDEM



# Course Management | 55 tech

#### Mr. Morado Vázquez, Eduardo

- Industrial Engineer in Product Design at UPV (2000)
- Quality Assurance at Ford Motor Company (2000-2004)
- MBA and (2011) Superior Master's Degree in Occupational Risk Prevention (2005)
- Implementation and leadership of engineering projects in manufacturing plants in the automotive and chemical sector, for first level multinationals (Spain, UK, Germany, Mexico), (2004-2021)
- Extensive experience as key user and trainer in the implementation of Quality, Safety, 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, etc.)
- Collaboration as a mentor of students at UPV and in different initiatives of non-profit organizations and foundations for the promotion of STEM in young people between 6 and 18 years old (2000-2018)





Don't miss the opportunity to specialize with us. You will find the most relevant information on this subject that will allow you to give a boost to your profession.

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

TECH's MBA in Industrial Management is an intensive program that will prepare you to face business challenges and decisions in the Industrial Management MBA field. The main objective is to promote personal and professional growth, helping students achieve success.

If you want to improve yourself, make a positive change professionally and network with the best, this is the place for you.

Achieve a positive change in your career, thanks to the opportunity that TECH offers you with this program.

#### **Time of Change**

During the program

13%

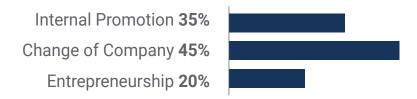
During the first year

61%

After 2 years

26%

#### Type of change



## Salary increase

This program represents a salary increase of more than 25.22% for our students

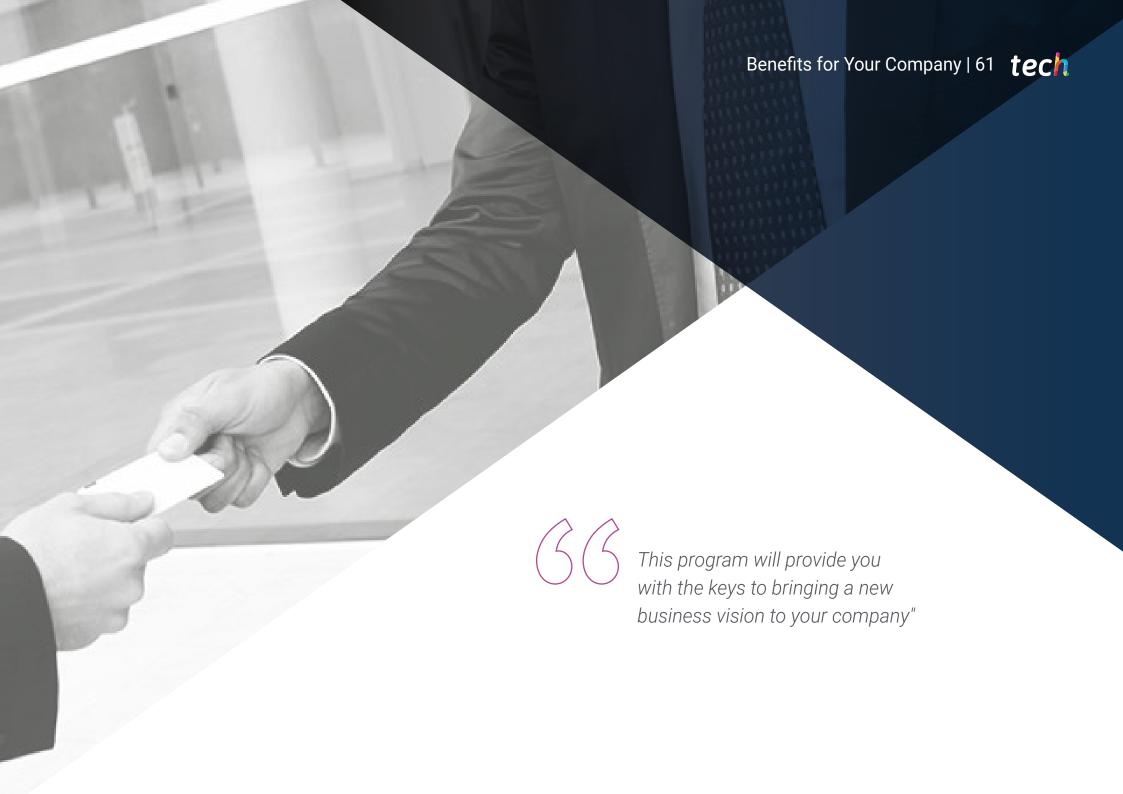
\$57,900

A salary increase of

25.22%

\$72,500





# tech 62 | Benefits for Your Company

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



#### Growth of talent and intellectual capital

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



# Retaining high-potential executives to avoid talent drain

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



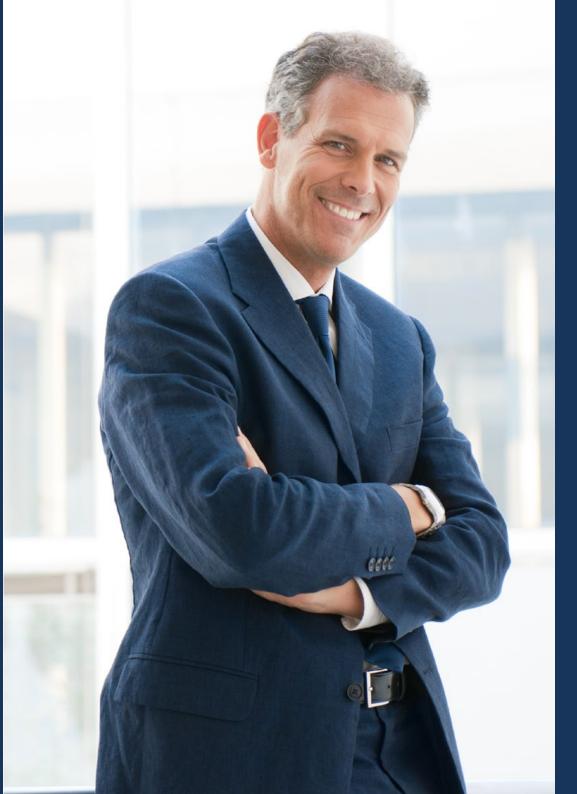
### **Building agents of change**

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



#### Increased international expansion possibilities

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





## **Project Development**

The professional can work on a real project or develop new projects in the field of R & D or business development of your company.



#### **Increased competitiveness**

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





# tech 66 | Certificate

This private qualification will allow you to obtain an **MBA** in **Industrial Management** 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** private qualification, 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: Executive Master's Degree in MBA in Industrial Management

Modality: online

Duration: 12 months

Accreditation: 60 ECTS





<sup>\*</sup>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.



# Executive Master's Degree MBA in Industrial Management

» Modality: online

» Duration: 12 months

» Certificate: TECH Global University

» Credits: 60 ECTS

» Schedule: at your own pace

» Exams: online

