Hybrid Professional Master's Degree

Digital Transformation and Industry 4.0

tech global university

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Digital Transformation and Industry 4.0

Modality: **Hybrid (Online + Internship)**
Duration: **12 months**
Certificate: **TECH Global University**
Accreditation: **60 + 4 ECTS**
Website: **www.techtitute.com/us/engineering/hybrid-professional-master-degree/hybrid-professional-master-degree-digital-transformation-industry-4-0**

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01

Introduction

The adoption of Digital Transformation and Industry 4.0 is redefining the global industrial landscape, offering new opportunities for innovation and operational efficiency. According to a recent survey conducted by a prestigious consulting firm, 75% of companies consider that the Fourth Industrial Revolution has had a significant impact on their strategy and operations. As such, these advanced technologies are enabling institutions to improve the quality of their products, reduce cycle times and customize production flows according to customer needs. In this context, engineers need to effectively handle tools such as Artificial Intelligence to develop innovative services. This is why TECH is launching a university degree focused on this subject.

Thanks to this Hybrid Professional Master's Degree, you will master emerging technologies such as Artificial Intelligence and the Internet of Things to significantly improve business processes"

Digital Transformation and Industry 4.0 have emerged as key catalysts in the evolution of manufacturing. These advanced technologies, such as the Internet of Things, are radically transforming traditional business models and redefining industrial operations. In this scenario, engineering professionals need to incorporate into their practice the most innovative strategies in this area to improve the efficiency of organizations, increase productivity and maintain competitiveness in a highly globalized and competitive market.

In this framework, TECH presents a pioneering and very complete Hybrid Professional Master's Degree in Digital Transformation and Industry 4.0. Designed by references in this field, the academic itinerary will delve into the latest advances in areas highly demanded by companies such as Artificial Intelligence, Machine Learning, Big Data or Natural Language Processing. Likewise, the syllabus will delve into the most sophisticated techniques for the creation of personalized user experiences that contribute to increase the level of customer satisfaction. In this way, graduates will develop advanced competencies to manage Digital Transformation projects that improve the operational efficiency of the entities.

Regarding the methodology of this university program, it consists of two periods. The first stage is theoretical and is taught in a convenient 100% online modality. In addition, TECH uses its disruptive Relearning system to guarantee a progressive and natural learning, which does not require investing extra efforts like the traditional memorization. The second phase consists of a practical stay of 3 weeks in a reference entity in the field of Digital Transformation and Industry 4.0. Therefore, the graduates will put into practice all their knowledge and will be integrated into a work team composed of experienced professionals in this area.

This **Hybrid Professional Master's Degree in Digital Transformation and Industry 4.0** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Development of more than 100 case studies presented by Digital Transformation and Industry 4.0 experts
- Its graphic, schematic and practical contents provide essential information on those disciplines that are indispensable for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection
- Furthermore, you will be able to carry out an internship in one of the best companies

You will develop solutions that enable a more personalized and effective interaction with customers"

You will carry out an intensive practical internship in a prestigious entity expert in Digital Transformation and Industry 4.0"

You will lead innovative Digital Transformation projects that differentiate the institution in the market.

In this Hybrid Professional Master's Degree proposal, of a professionalizing nature and blended mode, the program is aimed at updating Engineering professionals. The contents are based on the latest scientific evidence, and oriented in a didactic way to integrate theoretical knowledge into practice, and the theoretical-practical elements will facilitate the updating of knowledge.

Thanks to its multimedia content elaborated with the latest educational technology, it will allow the engineering professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to specialize in real situations. This program is designed around Problem-Based Learning, whereby the physician must try to solve the different professional practice situations that arise during the course. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

This program will allow you to learn through virtual learning systems, so that you can develop your work with total guarantees of success.

02

Why Study this Hybrid Professional Master's Degree?

Faced with the constant advance of emerging technologies such as Artificial Intelligence, companies are demanding the incorporation of engineers specialized in Digital Transformation and Industry 4.0 who promote automation to improve their operational efficiency, reduce costs and improve the quality of their products. To take advantage of these opportunities, professionals need to acquire a competitive advantage that differentiates them from other candidates. For this reason, TECH has created this pioneering degree, where the most recent update in areas such as Deep Learning, Blockchain or Quantum Computing is combined with a practical stay in a prestigious entity. In this way, graduates will achieve a complete vision of the most current panorama in Digital Transformation and Industry 4.0, being also guided by authentic experts in this field.

You will implement robust security measures to protect the critical systems of companies"

1. Updating from the latest technology available

New technologies are having a significant impact in the field of Digital Transformation and Industry 4.0, providing advances in the way services are designed, produced and managed. An example of this is advanced robotics, which allows repetitive tasks to be performed efficiently and reduces errors. Through this university program, TECH will provide students with the most cutting-edge technological tools to perform their work with maximum efficiency.

2. Gaining in-depth knowledge from the experience of top specialists

This Hybrid Professional Master's Degree has the participation of recognized experts in the field of Digital Transformation and Industry 4.0. During the first stage of the program, these teachers will provide students with personalized guidance to get the most out of it. Then, during the period of their practical stay, students will be supported by real professionals based in the institution that will host them for this type of training.

3. Entering first-class professional environments

In keeping with its priority to provide the most comprehensive programs, TECH rigorously chooses the institutions that will host its students during the 3-week Internship Program included in this degree. These companies have a high prestige, thanks to the fact that they have a staff made up of professionals highly specialized in Digital Transformation and Industry 4.0.

4. Combining the best theory with state-of-the-art practice

This program challenges the standards set in today's academic market, which lacks university programs focused on practical teaching. Instead, TECH introduces an innovative learning model that combines theory and practice, providing Engineering professionals with access to leading institutions in the field of Digital Transformation and Industry 4.0.

5. Expanding the boundaries of knowledge

Through its university program, TECH offers engineers the possibility to expand their professional opportunities internationally. This is possible thanks to the extensive network of contacts and collaborators of TECH, the largest digital university in the world.

You will have full practical immersion at the center of your choice"

03

Objectives

After completing this university program, engineering professionals will stand out for their thorough understanding of the emerging technologies of Industry 4.0, including Artificial Intelligence, the Internet of Things and Big Data. Along the same lines, graduates will develop technical skills in areas such as cybersecurity, data analysis and programming of automated systems. In this way, experts will design innovative solutions that optimize industrial processes, improve productivity and reduce costs.

You will use Big Data and advanced analytics to improve strategic decision making in companies"

General Objective

- This Hybrid Professional Master's Degree in Nursing in Digital Transformation and Industry 4.0 will provide engineers with the most advanced strategies to improve both the efficiency and sustainability of industrial processes through digitization and automation. In turn, specialists will acquire competencies in the design of complex system architectures, ensuring the optimal operation of different platforms. In addition, students will be able to lead teams and manage the organizational change necessary for the adoption of new digital processes

A university degree that incorporates all the knowledge you need to successfully lead Digital Transformation projects"

Specific Objectives

Module 1. Blockchain and Quantum Computing

- Acquire in-depth knowledge of the fundamentals of Blockchain technology and its value propositions
- Lead the creation of Blockchain-based projects and apply this technology to different business models and the use of tools such as Smart Contracts

Module 2. Big Data and Artificial Intelligence

- Delve into the knowledge of the fundamental principles of artificial intelligence
- Master the techniques and tools of this technology (machine learning/deep learning)
- Obtain a practical knowledge of one of the most widespread applications such as Chatbots and virtual assistants
- Acquire knowledge of the different transversal applications that this technology has in all fields

Module 3. Virtual, Augmented and Mixed Reality

- Acquire expert knowledge on the characteristics and fundamentals of virtual reality, augmented reality and mixed reality, as well as their differences
- Use applications of each of these technologies and develop solutions with each of them individually and in an integrated manner, combining them define immersive experiences

Module 4. Industry 4.0

- Analyze the origins of the so-called Fourth Industrial Revolution and the Industry 4.0 concept
- In-depth study of the key principles of Industry 4.0, the technologies on which they are based and the potential of all of them in their application to the different productive sectors

Module 5. Leading Industry 4.0

- Understand the current virtual era we live in and its leadership capacity, on which will depend the success and survival of the digital transformation processes in which any type of industry is involved
- Develop, from all available data, the Digital Twin of the facilities/systems/assets integrated in an IoT network

Module 6. Robotics, Drones and Augmented Workers

- Entering the world of robotics and automation
- Choose a robotic platform, prototype and know about simulators and robot operating system (ROS) in detail
- Delve into in the applications of artificial intelligence to robotics oriented to predict behaviors and optimize processes
- Study robotics concepts and tools, as well as use cases, real examples and integration with other systems and demonstration

Module 7. Industry 4.0 Automation Systems

- Delve into the main automation and control systems, their connectivity, the types of industrial communications and the type of data they exchange
- Convert the production process facilities into a true Smart Factory
- Be able to deal with large amounts of data, define their analysis and derive value from them
- Define continuous monitoring, predictive and prescriptive maintenance models

Module 8. Industry 4.0- Services and Solutions I

- Conduct an exhaustive analysis of the practical application that emerging technologies are having in the different economic sectors and in the value chain of their main industries
- In-depth knowledge of the primary and secondary economic sectors, as well as the technological impact they are experiencing

Module 9. Industry 4.0 Services and Solutions II

- Possess a thorough understanding of the technological impact and how technologies are revolutionizing the tertiary economic sector in the fields of transportation and logistics, health and healthcare (e-Health and Smart Hospitals), smart cities, the financial sector (Fintech) and mobility solutions
- Know the technological trends of the future

Module 10. Internet of Things

- Delve in the knowledge of an IoT platform and the elements that compose it, the challenges and opportunities to implement IoT platforms in factories and companies, the main business areas related to IoT platforms and the relationship between IoT platforms, robotics and other emerging technologies
- Know the main existing wearable devices, their usefulness, the security systems to be applied in any IoT model and its variant in the industrial world, called IoT

Module 11. Leadership, Ethics and Social Responsibility in Companies

- Analyze the impact of globalization on corporate governance and corporate management
- Evaluate the importance of effective leadership in the management and success of companies
- Define cross-cultural management strategies and their relevance in diverse business environments
- Develop leadership skills and understand the current challenges faced by leaders
- Determine the principles and practices of business ethics and their application in corporate decision making
- Structure strategies for the implementation and improvement of sustainability and social responsibility in business

Module 12. People and Talent Management

- Determine the relationship between strategic direction and human resources management
- Delve into the skills required for effective competency-based human resources management
- Delve into the methodologies for performance evaluation and performance management
- Integrate innovations in talent management and their impact on employee retention and loyalty
- Develop strategies for motivation and development of high performance teams
- Propose effective solutions for change management and conflict resolution in organizations

Module 13. Economic and Financial Management

- Analyze the macroeconomic environment and its influence on the national and international financial system
- Define information systems and Business Intelligence for financial decision making
- Differentiate key financial decisions and risk management in financial management
- Evaluate strategies for financial planning and obtaining business financing

Module 14. Commercial Management and Strategic Marketing

- Structure the conceptual framework and the importance of commercial management in companies
- Delve into the fundamental elements and activities of marketing and their impact on the organization
- Determine the stages of the marketing strategic planning process
- Evaluate strategies to improve corporate communication and the digital reputation of the company

Module 15. Executive Management

- Define the concept of General Management and its relevance in business management
- Evaluate the roles and responsibilities of the manager in the organizational culture
- Analyze the importance of operations management and quality management in the value chain
- Develop interpersonal communication and public speaking skills for the formation of spokespersons

04

Skills

This university degree will provide engineers with advanced skills to master emerging technologies such as the Internet of Things, Artificial Intelligence or Virtual Reality. In this sense, graduates will be highly qualified to design and implement automated systems that improve both the efficiency and accuracy of production processes. At the same time, experts will handle the most cutting-edge modeling software to optimize industrial procedures and perform virtual tests before physical implementation.

You will acquire skills to collect, analyze and interpret large volumes of data using Big Data techniques"

General Skills

- Have a thorough knowledge of the fundamental elements to successfully carry out a digital transformation process adapted to the new market rules
- Develop an advanced knowledge of the new emerging and exponential technologies that are affecting the vast majority of industrial and business processes in the market
- Adapt to the current market situation governed by automation, robotization and IoT platforms
- Apply the necessary tools to lead technological innovation and digital transformation processes

This university program will include real case studies and exercises for you to acquire skills in Digital Transformation and Industry 4.0"

Specific Skills

- Secure an existing IoT ecosystem or creating a secure one by deploying intelligent security systems
- Automate production systems with the integration of robots and industrial robotics systems
- Maximize value creation for the customer by applying Lean Manufacturing to the digitalization of our production process
- Know how the Blockchain works and the characteristics of the so-called networks
- Use the main techniques of artificial intelligence such as Machine Learning and Deep Learning, Neural Networks, and the applicability and use of Natural Language Recognition
- Face the great challenges related to artificial intelligence, such as providing it with emotions, creativity and personality, even considering how ethical and moral connotations may be affected in its use
- Create useful Chatbots and Virtual Assistants
- Create virtual worlds and elevate User Experience (UX) enhancement
- Integrate the benefits and main advantages of Industry 4.0
- Learn more about the key factors of the digital transformation of industry and the Industrial Internet
- Lead the new business models derived from Industry 4.0
- Develop future production models
- Face the challenges of Industry 4.0 and understanding its effects
- Master the essential technologies of Industry 4.0
- Lead manufacturing digitization processes and identify and define digital capabilities in an organization
- Define the architecture behind a Smart Factory
- Reflecting on technological markers in the post-covid era and in the era of absolute virtualization
- Learn more about the current situation in the digital transformation
- Use RPA (Robotic Process Automation) to automate processes in companies, gain efficiency and reduce costs
- Address the major challenges facing robotics and automation, such , as transparency and ethics

Delve into the most relevant theory in this field, subsequently applying it in a real work environment"

05

Course Management

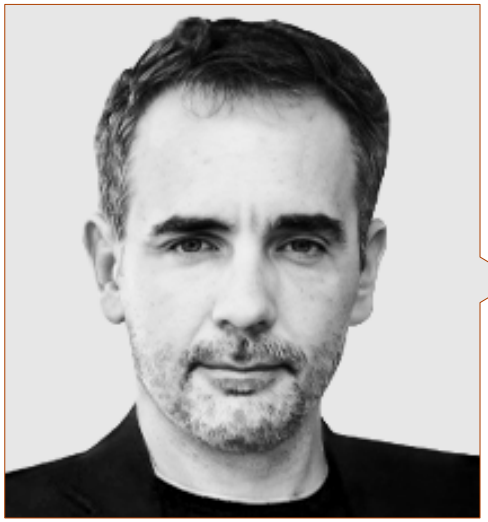
TECH's philosophy is to make available to all the most complete and renewed degrees in the academic panorama. To achieve this, it carries out a thorough process to form their respective teaching staff. Thanks to this, this Hybrid Professional Master's Degree has the participation of the best experts in the area of Digital Transformation and Industry 4.0. These professionals have an extensive work background, where they have been part of recognized institutions. Therefore, engineers have the guarantees they demand to access a high-intensity experience that will significantly raise their professional horizons.

You will access an academic itinerary designed by references in the field of Digital Transformation and Industry 4.0"

Management

Dr. Segovia Escobar, Pablo

- Chief Executive of the Defense Sector in the Company Tecnobit of the Oesía Group.
- Corporate Project Director Indra
- Master's Degree in Companies Administration and Management by the National University of Distance Education.
- Postgraduate in Strategic Management Function
- Member of: Spanish Association of People with High Intellectual Quotient



Dr. Diezma López, Pedro

- Chief Innovation Officer and CEO of Zerintia Technologies
- Founder of the technology company Acuilae
- Member of the Kebala Group for business incubation and promotion
- Consultant for technology companies such as Endesa, Airbus or Telefónica
  "Best Initiative" Wearable Award in eHealth 2017 and "Best Technological Solution" 2018 for Occupational Safety

Professors

Ms. Sánchez López, Cristina

- CEO and founder of Acuilae
- Artificial Intelligence consultant at ANHELA IT
- Creator of Ethyka Software for Computer System Security
- (Software Engineer) for the Accenture Group in large clients such as Bank of Santander, BBVA, Endesa or Barclays Bank.
- Master's Degree in Data Science at KSchool
- Degree in Statistics from the Complutense University Madrid

Mr. Montes, Armando

- EMERTECH collaborator developing technology products such as Smart Vest
- Expert in drones, robots , electronics and 3D printers
- Ordering and Customer Fulfillment Specialist for GE Renewable Energy
- CEO of the School of Superheroes Foundation related to 3D Printing and Smart Robot Implementation and the Implementation of Smart Robots

Mr. Castellano Nieto, Francisco

- Head of Indra Company Maintenance Area
- Consultant for Siemens AG, Allen-Bradley at Rockwell Automation and other companies
- Industrial Electronic Technical Engineer by the Universidad Pontificia Comillas

Mr. Asenjo Sanz, Álvaro

- IT Consultant for Capitole Consulting
- Project Manager for Kolokium Blockchain Technologies
- IT Engineer for Aubay, Tecnocom, Humantech, Ibermatica and Acens Technologies
- Degree from Computer Engineering of Systems at the Complutense University of Madrid

Mr. González Cano, José Luis

- Lighting Designer for different projects as a freelance expert
- Vocational training teacher in electronic systems, telematics (CISCO certified instructor), radio communications, IoT
- Degree in Optics and Optometry from the Complutense University of Madrid
- Industrial Electronics Technician by Netecad Academy
- Member of: The Professional Association of Lighting Designers (Technical Consultant) and Member of the Spanish Lighting Committee

The teaching team will provide you with the most advanced techniques in Natural Language Recognition"

06

Educational Plan

The teaching materials that make up this degree have been developed by experts in Digital Transformation and Industry 4.0. In this way, students will have access to an excellent quality syllabus that meets the requirements of the labor market. Made up of 15 specialized modules, the curriculum will delve into the most innovative techniques in areas such as Blockchain, Artificial Intelligence, Deep Learning or Big Data. In addition, the syllabus will delve into the most advanced techniques in Natural Language Processing. In this way, engineers will develop skills to implement automated systems that improve the efficiency of production processes.

You will manage complex system architectures, ensuring the integration and optimal operation of different technologies"

Module 1. Blockchain and Quantum Computing

1.1. Aspects of Decentralization
- 1.1.1. Market Size, Growth, Companies and Ecosystem
- 1.1.2. Fundamentals of Blockchain

1.2. Background: Bitcoin, Ethereum, etc.
- 1.2.1. Popularity of Decentralized Systems
- 1.2.2. Evolution of Decentralized Systems

1.3. Blockchain Operation and Examples
- 1.3.1. Types of Blockchain and Protocols
- 1.3.2. Wallets, Mining and More

1.4. Characteristics of Blockchain Networks
- 1.4.1. Functions and Properties of Blockchain Networks
- 1.4.2. Applications: Cryptocurrencies, Reliability, Chain of Custody, etc

1.5. Types of Blockchain
- 1.5.1. Public and Private Blockchains
- 1.5.2. Hard and Soft Forks

1.6. Smart Contracts
- 1.6.1. Intelligent Contracts and Their Potential
- 1.6.2. Smart Contract Applications

1.7. Industry Use Models
- 1.7.1. Blockchain Applications by Industry
- 1.7.2. Blockchain Success Stories by Industry

1.8. Security and Cryptography
- 1.8.1. Objectives of Cryptography
- 1.8.2. Digital Signatures and Hash Functions

1.9. Cryptocurrencies and Uses
- 1.9.1. Types of Cryptocurrencies Bitcoin, Hyperledger, Ethereum, Litecoin, etc.
- 1.9.2. Current and Future Impact of Cryptocurrencies
- 1.9.3. Risks and Regulations

1.10. Quantum Computing
- 1.10.1. Definition and Keys
- 1.10.2. Uses of Quantum Computing

Module 2. Big Data and Artificial Intelligence

2.1. Fundamental Principles of Big Data
- 2.1.1. Big Data
- 2.1.2. Tools to Work With Big Data

2.2. Data Mining and Warehousing
- 2.2.1. Data Mining Cleaning and Standardization
- 2.2.2. Information Extraction, Machine Translation, Sentiment Analysis, etc
- 2.2.3. Types of Data Storage

2.3. Data Intake Applications
- 2.3.1. Principles of Data intake
- 2.3.2. Data Ingestion Technologies to Serve Business Needs

2.4. Data Visualization
- 2.4.1. The Importance of Data Visualization
- 2.4.2. Tools to Carry It Out Tableau, D3, matplotlib (Python), Shiny®

2.5. Machine Learning
- 2.5.1. Understanding Machine Learning
- 2.5.2. Supervised and Unsupervised Learning
- 2.5.3. Types of Algorithms

2.6. Neural Networks (Deep Learning)
- 2.6.1. Neural Network: Parts and Operation
- 2.6.2. Types of Networks CNN, RNN
- 2.6.3. Applications of Neural Networks; Image Recognition and Natural Language Interpretation
- 2.6.4. Generative Text Networks: LSTM

2.7. Natural Language Recognition
- 2.7.1. PLN (Processing Natural Language)
- 2.7.2. Advanced PLN Techniques: Word2vec, Doc2vec

2.8. Chatbots and Virtual Assistants
- 2.8.1. Types of Assistants: Voice and Text Assistants
- 2.8.2. Fundamental Parts for the Development of an Assistant: Intents, Entities and Dialog Flow
- 2.8.3. Integrations: Web, Slack, WhatsApp, Facebook
- 2.8.4. Assistant Development Tools: Dialog Flow, Watson Assistant

2.9. Emotions, Creativity and Personality in IA
  2.9.1. Understand How to Detect Emotions Using Algorithms
  2.9.2. Creating a Personality: Language, Expressions and Content
2.10. Future of Artificial Intelligence
2.11. Reflections

Module 3. Virtual, Augmented and Mixed Reality

3.1. Market and Tendencies
  3.1.1. Current Market Situation
  3.1.2. Reports and Growth by Different Industries
3.2. Differences Between Virtual, Augmented and Mixed Reality
  3.2.1. Differences Between Immersive Realities
  3.2.2. Immersive Reality Typology
3.3. Virtual Reality Cases and Uses
  3.3.1. Origin and Fundamentals of Virtual Reality
  3.3.2. Cases Applied to Different Sectors and Industries
3.4. Augmented Reality Cases and Uses
  3.4.1. Origin and Fundamentals of Augmented Reality
  3.4.2. Cases Applied to Different Sectors and Industries
3.5. Mixed and Holographic Reality
  3.5.1. Origin, History and Fundamentals of Mixed and Holographic Reality
  3.5.2. Cases Applied to Different Sectors and Industries
3.6. 360º Photography and Video
  3.6.1. Camera Typology
  3.6.2. Uses of 360 Images
  3.6.3. Creating a Virtual Space in 360 Degrees
3.7. Virtual World Creation
  3.7.1. Platforms for the Creation of Virtual Environments
  3.7.2. Strategies for the Creation of Virtual Environments
3.8. User Experience (UX)
  3.8.1. Components in the User Experience
  3.8.2. Tools for the Creation of User Experiences
3.9. Devices and Glasses for Immersive Technologies
  3.9.1. Device Typology on the Market
  3.9.2. Glasses and Wearables: Operation, Models and Uses
  3.9.3. Smart Glasses Applications and Evolution
3.10. Future Immersive Technologies
  3.10.1. Tendencies and Evolution
  3.10.2. Challenges and Opportunities

Module 4. Industry 4.0

4.1. Definition of 4.0 Industry
  4.1.1. Features
4.2. Benefits of the 4.0 Industry
  4.2.1. Key Factors
  4.2.2. Main Advantages
4.3. Industrial Revolutions and Vision of the Future
  4.3.1. Industrial Revolutions
  4.3.2. Keys Factors in Each Revolution
  4.3.3. Technological Principles as a Basis for Possible New Revolutions
4.4. The Digital Transformation of the Industry
  4.4.1. Characteristics of the Digitization of the Industry
  4.4.2. Disruptive Technologies
  4.4.3. Applications in the Industry
4.5. Forth Industrial Revolution. Key Principles of Industry 4.0
  4.5.1. Definitions
  4.5.2. Key Principles and Applications
4.6. 4.0 Industry and Industrial Internet
  4.6.1. Origin of IIoT
  4.6.2. Operation
  4.6.3. Steps to Follow for its Implementation
  4.6.4. Benefits
4.7. Smart Factory Principles
  4.7.1. The Smart Factory
  4.7.2. Elements that Define a Smart Factory
  4.7.3. Steps to Deploy a Smart Factory

4.8. Status of the 4.0 Industry
  4.8.1. Status of the 4.0 Industry in Different Sectors
  4.8.2. Barriers to the Implementation of 4.0 Industry
4.9. Challenges and Risks
  4.9.1. DAFO Analysis
  4.9.2. Challenges
4.10. Role of Technological Capabilities and the Human Factor
  4.10.1. Disruptive Technologies in Industry 4.0
  4.10.2. The Importance of the Human Factor Key Factor

Module 5. Leading Industry 4.0

5.1. Leadership Abilities
  5.1.1. Leadership Factors in the Human Factor
  5.1.2. Leadership and Technology
5.2. Industry 4.0 and the Future of Production
  5.2.1. Definitions
  5.2.2. Production Systems
  5.2.3. Future of Digital Production Systems
5.3. Effects of Industry 4.0
  5.3.1. Effects and Challenges
5.4. Essential Technologies in Industry 4.0
  5.4.1. Definition of Technologies
  5.4.2. Characteristics of Technologies
  5.4.3. Applications and Impacts
5.5. Digitization of Manufacturing
  5.5.1. Definitions
  5.5.2. Benefits of the Digitization of Manufacturing
  5.5.3. Digital Twins
5.6. Digital Capabilities in an Organization
  5.6.1. Development Digital Capabilities
  5.6.2. Understanding the Digital Ecosystem
  5.6.3. Digital Vision of the Business
5.7. Architecture Behind a Smart Factory
  5.7.1. Areas and Operations
  5.7.2. Connectivity and Security
  5.7.3. Case Uses
5.8. Technology Markers in the Post Covid Era
  5.8.1. Technological Challenges in the Post Covid Era
  5.8.2. New Case Uses
5.9. The Era of Absolute Virtualization
  5.9.1. Virtualization
  5.9.2. The New Era of Virtualization
  5.9.3. Advantages
5.10. Current Situation in Digital Transformation Gartner Hype
  5.10.1. Gartner Hype
  5.10.2. Analysis of Technologies and Their Status
  5.10.3. Data Exploitation

Module 6. Robotics, Drones and Augmented Workers

6.1. Robotics
  6.1.1. Robotics, Societies and Cinema
  6.1.2. Components and Parts of Robot
6.2. Robotics and Advanced Automation: Simulators, Cobots
  6.2.1. Transfer of Learning
  6.2.2. Cobots and Case Uses
6.3. RPA (Robotic Process Automatization)
  6.3.1. Understanding RPA and its Functioning
  6.3.2. RPA Platforms, Projects and Roles
6.4. *Robot* as a *Service* (RaaS)
  6.4.1. Challenges and Opportunities for Implementing RaaS Services and Robotics in Enterprises
  6.4.2. Functioning of a RaaS system
6.5. Drones and Automated Vehicles
  6.5.1. Components and Drones Operation
  6.5.2. Uses, Types and Applications of Drones
  6.5.3. Evolution of Drones and Autonomous Vehicles

6.6. The Impact of 5G
- 6.6.1. Evolution of Communications and Implications
- 6.6.2. Uses of 5G Technology

6.7. Augmented Workers
- 6.7.1. Human-Machine Integration in Industrial Environments
- 6.7.2. Challenges in Worker-Robot Collaboration

6.8. Transparency, Ethics and Traceability
- 6.8.1. Ethical Challenges in Robotics and Artificial Intelligence
- 6.8.2. Monitoring, Transparency and Traceability Methods

6.9. Prototyping, Components and Evolution
- 6.9.1. Prototyping Platforms
- 6.9.2. Phases to Make a Prototype

6.10. Future of Robotics
- 6.10.1. Trends in Robotization
- 6.10.2. New Types of Robots

Module 7. Industry 4.0 Automation Systems

7.1. Industrial Automation
- 7.1.1. Automization
- 7.1.2. Architecture and Components
- 7.1.3. Safety

7.2. Industrial Robotics
- 7.2.1. Fundamentals of Industrial Robotics
- 7.2.2. Models and Impact on Industrial Processes

7.3. PLC Systems and Industrial Control
- 7.3.1. PLC Evolution and Status
- 7.3.2. Evolution of Programming Languages
- 7.3.3. Computer Integrated Automation CIM

7.4. Sensors and Actuators
- 7.4.1. Classification of Transducers
- 7.4.2. Types of Sensors
- 7.4.3. Standardization of Signals

7.5. Monitor and Manage
- 7.5.1. Types of Actuators
- 7.5.2. Feedback Control Systems

7.6. Industrial Connectivity
- 7.6.1. Standardized Fieldbuses
- 7.6.2. Connectivity

7.7. Proactive / Predictive Maintenance
- 7.7.1. Predictive Maintenance
- 7.7.2. Fault Identification and Analysis
- 7.7.3. Proactive Actions Based on Predictive Maintenance

7.8. Continuous Monitoring and Prescriptive Maintenance
- 7.8.1. Prescriptive Maintenance Concept in Industrial Environments
- 7.8.2. Selection and Exploitation of Data for Self-Diagnostics

7.9. Lean Manufacturing
- 7.9.1. Lean Manufacturing
- 7.9.2. Benefits of Lean Implementation in Industrial Processes

7.10. Industrialized Processes in Industry 4.0. Use Case
- 7.10.1. Project definition
- 7.10.2. Technological Selection
- 7.10.3. Connectivity
- 7.10.4. Data Exploitation

Module 8. Industry 4.0 - Sectorial Services and Solutions I

8.1. Industry 4.0 and Business Strategies
- 8.1.1. Factors of Business Digitalization
- 8.1.2. Roadmap for Business Digitalization

8.2. Digitalization of Processes and the Value Chain
- 8.2.1. Value Chain
- 8.2.2. Key Steps in the Digitization of Processes

8.3. Sector Solutions Primary Sector
- 8.3.1. The Primary Economic Sector
- 8.3.2. Characteristics of Each Subsector

8.4. Digitization of the Primary Sector: Smart Farms
- 8.4.1. Main Characteristics
- 8.4.2. Keys Factors of Digitization

8.5. Digitization of the Primary Sector: Digital and Intelligent Agriculture
- 8.5.1. Main Characteristics
- 8.5.2. Keys Factors of Digitization

8.6. Sector Solutions Secondary Sector
- 8.6.1. The Secondary Economic Sector
- 8.6.2. Characteristics of Each Subsector

8.7. Digitization of the Secondary Sector: Smart Factory
- 8.7.1. Main Characteristics
- 8.7.2. Keys Factors of Digitization

8.8. Digitization of the Secondary Sector: Energy
- 8.8.1. Main Characteristics
- 8.8.2. Keys Factors of Digitization

8.9. Digitization of the Secondary Sector: Construction
- 8.9.1. Main Characteristics
- 8.9.2. Keys Factors of Digitization

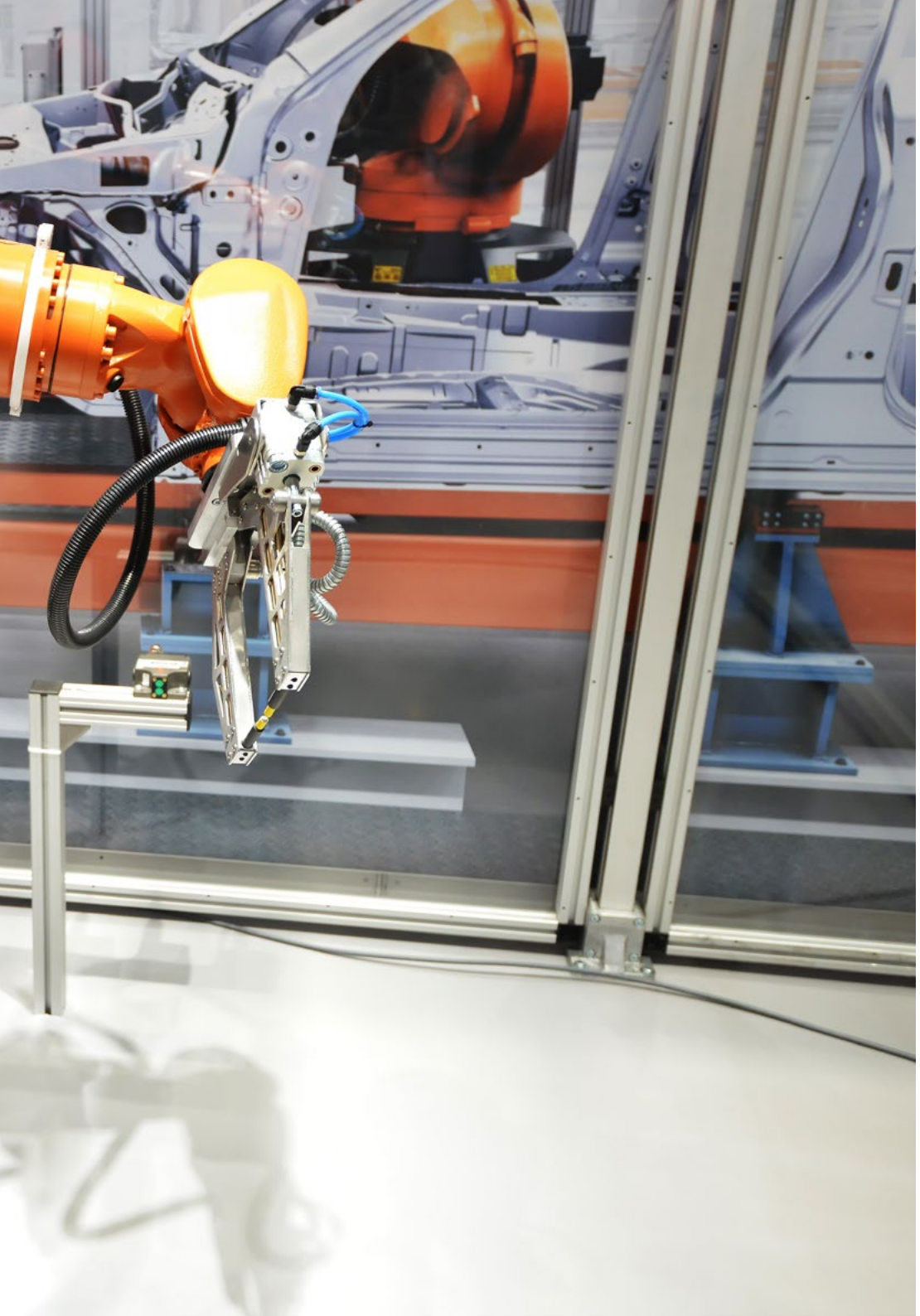
8.10. Digitization of the Secondary Sector: Mining
- 8.10.1. Main Characteristics
- 8.10.2. Keys Factors of Digitization

Module 9. Industry 4.0 Industry - Sectorial Services and Solutions II

9.1. Tertiary Sector Solutions
- 9.1.1. Tertiary Economic Sector
- 9.1.2. Characteristics of Each Subsector

9.2. Digitalization of the Tertiary Sector: Transportation
- 9.2.1. Main Characteristics
- 9.2.2. Keys Factors of Digitization

9.3. Digitization of the Tertiary Sector: e-Health
- 9.3.1. Main Characteristics
- 9.3.2. Keys Factors of Digitization



9.4. Digitization of the Tertiary Sector: Smart Hospitals
- 9.4.1. Main Characteristics
- 9.4.2. Keys Factors of Digitization

9.5. Digitization of the Tertiary Sector: Smart Cities
- 9.5.1. Main Characteristics
- 9.5.2. Keys Factors of Digitization

9.6. Digitalization of the Tertiary Sector: Logistics
- 9.6.1. Main Characteristics
- 9.6.2. Keys Factors of Digitization

9.7. Digitalization of the Tertiary Sector: Tourism
- 9.7.1. Main Characteristics
- 9.7.2. Keys Factors of Digitization

9.8. Digitization of the Tertiary Sector: Fintech
- 9.8.1. Main Characteristics
- 9.8.2. Keys Factors of Digitization

9.9. Digitalization of the Tertiary Sector: Mobility
- 9.9.1. Main Characteristics
- 9.9.2. Keys Factors of Digitization

9.10. Future Technological Tendencies
- 9.10.1. New Technological Innovations
- 9.10.2. Application Trends

Module 10. Internet of Things (IoT)

10.1. Cyber-Physical Systems (CPS) in the Industry 4.0 Vision
- 10.1.1. Internet of Things (IoT)
- 10.1.2. Components Involved in IoT
- 10.1.3. Cases and Applications of IoT

10.2. Internet of Things and Cyber-Physical Systems
- 10.2.1. Computing and Communication Capabilities to Physical Objects
- 10.2.2. Sensors, Data and Elements in Cyber-Physical Systems

10.3. Device Ecosystem
- 10.3.1. Typologies, Examples and Uses
- 10.3.2. Applications of the Different Devices

10.4. IoT Platforms and their Architecture
- 10.4.1. IoT Market Typologies and Platforms
- 10.4.2. Operation of an IoT Platform

10.5. Digital Twins
- 10.5.1. Digital Twins
- 10.5.2. Uses and Applications the Digital Twin

10.6. Indoor & outdoor Geolocation (Real Time Geospatial)
- 10.6.1. Indoor and Outdoor Geolocation Platforms
- 10.6.2. Implications and Challenges of Geolocation in an IoT Project

10.7. Security Intelligence Systems
- 10.7.1. Typologies and Platforms for Security Systems Implementation
- 10.7.2. Components and Architectures in Intelligent Safety Systems

10.8. IoT and IIoT Platform Security
- 10.8.1. Security Components in an IoT System
- 10.8.2. IoT Security Implementation Strategies

10.9. Wearables at Work
- 10.9.1. Types of Wearables in Industrial Environments
- 10.9.2. Lessons Learned and Challenges in Implementing Wearables in the Workplace

10.10. Implementing an API to Interact with a Platform
- 10.10.1. Types of APIs Involved in an IoT Platform
- 10.10.2. API Market
- 10.10.3. Strategies and Systems to Implement API Integrations

Module 11. Leadership, Ethics and Social Responsibility in Companies

11.1. Globalization and Governance
- 11.1.1. Governance and Corporate Governance
- 11.1.2. The Fundamentals of Corporate Governance in Companies
- 11.1.3. The Role of the Board of Directors in the Corporate Governance Framework

11.2. Leadership
- 11.2.1. Leadership. A Conceptual Approach
- 11.2.2. Leadership in Companies
- 11.2.3. The Importance of Leaders in Business Management

11.3. Cross-Cultural Management
- 11.3.1. Concept of Cross-Cultural Management
- 11.3.2. Contributions to the Knowledge of National Cultures
- 11.3.3. Diversity Management

11.4. Management and Leadership Development
- 11.4.1. Concept of Management Development
- 11.4.2. Concept of Leadership
- 11.4.3. Leadership Theories
- 11.4.4. Leadership Styles
- 11.4.5. Intelligence in Leadership
- 11.4.6. The Challenges of Today's Leader

11.5. Business Ethics
- 11.5.1. Ethics and Morality
- 11.5.2. Business Ethics
- 11.5.3. Leadership and Ethics in Companies

11.6. Sustainability
- 11.6.1. Sustainability and Sustainable Development
- 11.6.2. The 2030 Agenda
- 11.6.3. Sustainable Companies

11.7. Corporate Social Responsibility
- 11.7.1. International Dimensions of Corporate Social Responsibility
- 11.7.2. Implementing Corporate Social Responsibility
- 11.7.3. The Impact and Measurement of Corporate Social Responsibility

11.8. Responsible Management Systems and Tools
- 11.8.1. CSR: Corporate Social Responsibility
- 11.8.2. Essential Aspects for Implementing a Responsible Management Strategy
- 11.8.3. Steps for the Implementation of a Corporate Social Responsibility Management System
- 11.8.4. Tools and Standards of CSR

11.9. Multinationals and Human Rights
- 11.9.1. Globalization, Multinational Corporations and Human Rights
- 11.9.2. Multinational Corporations and International Law
- 11.9.3. Legal Instruments for Multinationals in the Field of Human Rights

11.10. Legal Environment and Corporate Governance
- 11.10.1. International Rules on Importation and Exportation
- 11.10.2. Intellectual and Industrial Property
- 11.10.3. International Labor Law

Module 12. People and Talent Management

12.1. Strategic People Management
- 12.1.1. Strategic Human Resources Management
- 12.1.2. Strategic People Management

12.2. Human Resources Management by Competencies
- 12.2.1. Analysis of the Potential
- 12.2.2. Remuneration Policy
- 12.2.3. Career/Succession Planning

12.3. Performance Evaluation and Performance Management
- 12.3.1. Performance Management
- 12.3.2. Performance Management: Objectives and Process

12.4. Innovation in Talent and People Management
- 12.4.1. Strategic Talent Management Models
- 12.4.2. Talent Identification, Training and Development
- 12.4.3. Loyalty and Retention
- 12.4.4. Proactivity and Innovation

12.5. Motivation
- 12.5.1. The Nature of Motivation
- 12.5.2. Expectations Theory
- 12.5.3. Needs Theory
- 12.5.4. Motivation and Financial Compensation

12.6. Developing High Performance Teams
- 12.6.1. High-Performance Teams: Self-Managing Teams
- 12.6.2. Methodologies for Managing High Performance Self-Managed Teams

12.7. Change Management
- 12.7.1. Change Management
- 12.7.2. Types of Change Management Processes
- 12.7.3. Stages or Phases in Change Management

12.8. Negotiation and Conflict Management
- 12.8.1. Negotiation
- 12.8.2. Conflict Management
- 12.8.3. Crisis Management

12.9. Executive Communication
- 12.9.1. Internal and External Communication in the Business Environment
- 12.9.2. Communication Departments
- 12.9.3. The Head of Communication of the Company. The Profile of the Dircom

12.10. Productivity, Attraction, Retention and Activation of Talent
- 12.10.1. Productivity
- 12.10.2. Talent Attraction and Retention Levers

Module 13. Economic and Financial Management

13.1. Economic Environment
- 13.1.1. Macroeconomic Environment and the National Financial System
- 13.1.2. Financial Institutions
- 13.1.3. Financial Markets
- 13.1.4. Financial Assets
- 13.1.5. Other Financial Sector Entities

13.2. Executive Accounting
- 13.2.1. Basic Concepts
- 13.2.2. The Company's Assets
- 13.2.3. The Company's Liabilities
- 13.2.4. The Company's Net Worth
- 13.2.5. The Income Statement

13.3. Information Systems and Business Intelligence
- 13.3.1. Fundamentals and Classification
- 13.3.2. Cost Allocation Phases and Methods
- 13.3.3. Choice of Cost Center and Impact

13.4. Budget and Management Control
- 13.4.1. The Budgetary Model
- 13.4.2. The Capital Budget
- 13.4.3. The Operating Budget
- 13.4.5. The Cash Budget
- 13.4.6. Budget Monitoring

13.5. Financial Management
- 13.5.1. The Company's Financial Decisions
- 13.5.2. The Financial Department
- 13.5.3. Cash Surpluses
- 13.5.4. Risks Associated with Financial Management
- 13.5.5. Risk Management of the Financial Management

13.6. Financial Planning
- 13.6.1. Definition of Financial Planning
- 13.6.2. Actions to Be Taken in Financial Planning
- 13.6.3. Creation and Establishment of the Business Strategy
- 13.6.4. The Cash Flow Chart
- 13.6.5. The Working Capital Chart

13.7. Corporate Financial Strategy
- 13.7.1. Corporate Strategy and Sources of Financing
- 13.7.2. Corporate Financing Financial Products

13.8. Strategic Financing
- 13.8.1. Self-financing
- 13.8.2. Increase in Shareholder's Equity
- 13.8.3. Hybrid Resources
- 13.8.4. Financing through Intermediaries

13.9. Financial Analysis and Planning
- 13.9.1. Analysis of the Balance Sheet
- 13.9.2. Analysis of the Income Statement
- 13.9.3. Profitability Analysis

13.10. Analyzing and Solving Cases/Problems
- 13.10.1. Financial Information on Industria de Diseño y Textil, S.A. (INDITEX)

Module 14. Commercial Management and Strategic Marketing

14.1. Commercial Management
- 14.1.1. Conceptual Framework of Commercial Management
- 14.1.2. Commercial Strategy and Planning
- 14.1.3. The Role of Sales Managers

14.2. Marketing
- 14.2.1. The Concept of Marketing
- 14.2.2. The Basic Elements of Marketing
- 14.2.3. Marketing Activities in Companies

14.3. Strategic Marketing Management
- 14.3.1. The Concept of Strategic Marketing
- 14.3.2. Concept of Strategic Marketing Planning
- 14.3.3. Stages in the Process of Strategic Marketing Planning

14.4. Digital Marketing and e-Commerce
- 14.4.1. Objectives of Digital Marketing and e-Commerce
- 14.4.2. Digital Marketing and the Media It Uses
- 14.4.3. E-Commerce. General Context
- 14.4.4. Categories of e-Commerce
- 14.4.5. Advantages and Disadvantages of e-Commerce Compared to Traditional Commerce

14.5. Digital Marketing to Reinforce a Brand
- 14.5.1. Online Strategies to Improve Brand Reputation
- 14.5.2. Branded Content and Storytelling

14.6. Digital Marketing to Attract and Retain Customers
- 14.6.1. Loyalty and Engagement Strategies Using the Internet
- 14.6.2. Visitor Relationship Management
- 14.6.3. Hypersegmentation

14.7. Digital Campaign Management
- 14.7.1. What Is a Digital Advertising Campaign?
- 14.7.2. Steps to Launch an Online Marketing Campaign
- 14.7.3. Mistakes in Digital Advertising Campaigns

14.8. Sales Strategy
- 14.8.1. Sales Strategy
- 14.8.2. Sales Methods

14.9. Corporate Communication
- 14.9.1. Concept
- 14.9.2. The Importance of Communication in the Organization
- 14.9.3. Type of Communication in the Organization
- 14.9.4. Functions of Communication in the Organization
- 14.9.5. Elements of Communication
- 14.9.6. Problems of Communication
- 14.9.7. Communication Scenarios

14.10. Digital Communication and Reputation
- 14.10.1. Online Reputation
- 14.10.2. How to Measure Digital Reputation?
- 14.10.3. Online Reputation Tools
- 14.10.4. Online Reputation Report
- 14.10.5. Online Branding

Module 15. Executive Management

15.1. General Management
- 15.1.1. The Concept of General Management
- 15.1.2. The Role of the CEO
- 15.1.3. The CEO and their Responsibilities
- 15.1.4. Transforming the Work of Management

15.2. Manager Functions: Organizational Culture and Approaches
- 15.2.1. Manager Functions: Organizational Culture and Approaches

10.3. Operations Management
- 15.3.1. The Importance of Management
- 15.3.2. Value Chain
- 15.3.3. Quality Management

15.4. Public Speaking and Spokesperson Education
- 15.4.1. Interpersonal Communication
- 15.4.2. Communication Skills and Influence
- 15.4.3. Communication Barriers

15.5. Personal and Organizational Communication Tools
- 15.5.1. Interpersonal Communication
- 15.5.2. Interpersonal Communication Tools
- 15.5.3. Communication in the Organization
- 15.5.4. Tools in the Organization

15.6. Communication in Crisis Situations
- 15.6.1. Crisis
- 15.6.2. Phases of the Crisis
- 15.6.3. Messages: Contents and Moments

15.7. Preparation of a Crisis Plan
- 15.7.1. Analysis of Possible Problems
- 15.7.2. Planning
- 15.7.3. Adequacy of Personnel

15.8. Emotional Intelligence
- 15.8.1. Emotional Intelligence and Communication
- 15.8.2. Assertiveness, Empathy, and Active Listening
- 15.8.3. Self- Esteem and Emotional Communication

15.9. Personal Branding
- 15.9.1. Strategies for Personal Brand Development
- 15.9.2. Personal Branding Laws
- 15.9.3. Tools for Creating Personal Brands

15.10. Leadership and Team Management
- 15.10.1. Leadership and Leadership Styles
- 15.10.2. Leadership Skills and Challenges
- 15.10.3. Managing Change Processes
- 15.10.4. Managing Multicultural Teams

07

Clinical Internship

After passing the online theoretical period, this Hybrid Professional Master's Degree provides for graduates to carry out a practical internship in a prestigious organization in the field of Digital Transformation and Industry 4.0. During the course of this itinerary, engineers will have the support of a specialized tutor, who will accompany them throughout the process, both in the preparation and in the development of the internship.

You will be part of a reference entity in the field of Digital Transformation and Industry 4.0"

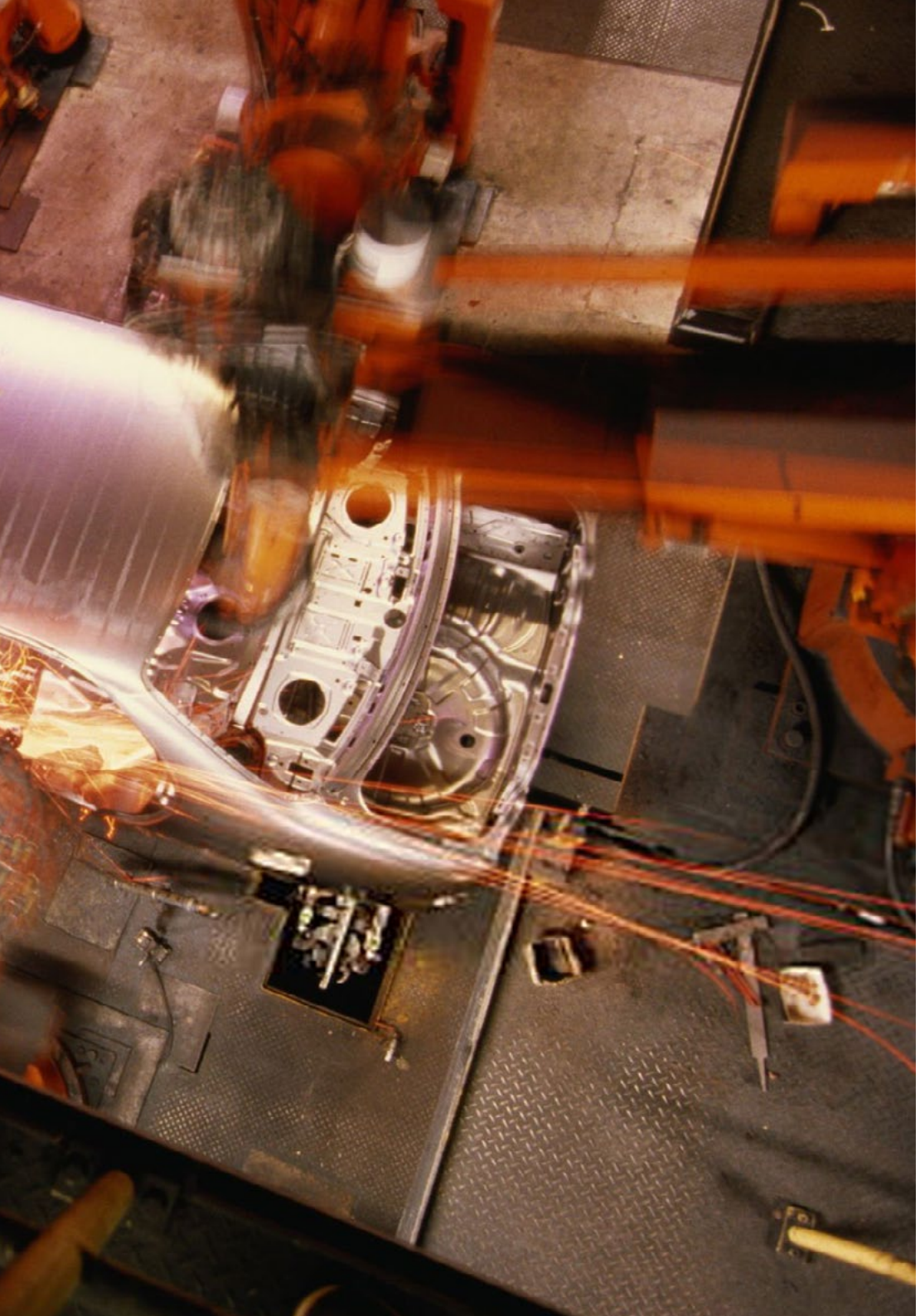
The Internship Program's Internship Program in Digital Transformation and Industry 4.0 is made up of a 3-week clinical internship in a renowned organization, from Monday to Friday with consecutive 8-hour days of practical teaching alongside an attached specialist. Graduates will thus have the opportunity to work in a real work scenario, where they will be able to develop their skills in this field.

During their practical stay, the engineers will be integrated into a work team composed of professionals in Digital Transformation and Industry 4.0. In this way, the graduates will work actively in the projects that the experts are carrying out at that time.

Undoubtedly, students have an ideal opportunity to broaden their knowledge while working in a field that is highly demanded by organizations and that requires constant updating in order to offer top quality services.

The practical part will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other training partners that facilitate teamwork and multidisciplinary integration as transversal competencies for the praxis of Digital Transformation and Industry 4.0 (learning to be and learning to relate).

The procedures described below will be the basis of the practical part of the program, and their implementation will be subject to the center's own availability and workload, the proposed activities being the following:



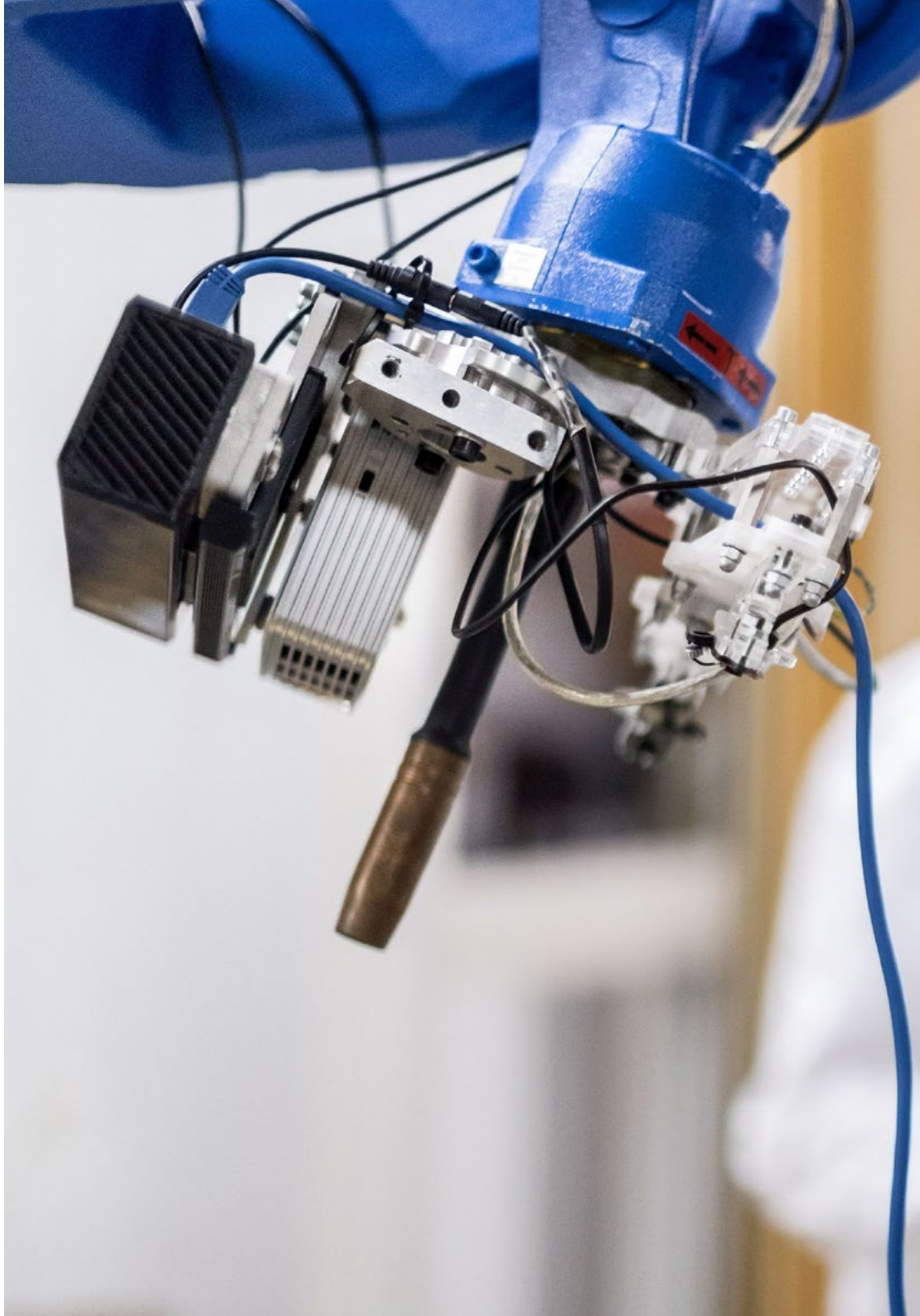
Module	Practical Activity
Blockchain Technology	Create and deploy applications that run on a blockchain network, enabling secure and transparent transactions without intermediaries
	Develop digital identity and verifiable systems using blockchain to protect both privacy and security of personal data
	Manage tokens representing physical or digital assets, facilitating the buying, selling and trading of these assets in a transparent manner
	Execute solutions for fast payments and money transfers using cryptocurrencies and other forms of digital cash
Large Volumes of Data	Build data pipelines for collecting, processing and storing large volumes of data from a variety of sources
	Perform advanced analytics with the goal of discovering patterns, trends, or correlations within the data that can aid in strategic decision-making
	Train Machine Learning models for prediction, classification and anomaly detection
	Design dashboards and interactive visualization tools that present complex data in a clear and understandable way
Smart Production	Implement IoT devices to collect real time data from machines and industrial processes
	Program automated control systems in order to improve the efficiency and accuracy of manufacturing processes
	Use simulation software to create digital models of industrial processes to help optimize production and reduce costs
	Employ advanced technologies to improve traceability and efficiency in the supply chain, from raw material procurement to final product delivery
Virtual Reality Techniques	Create realistic and detailed virtual environments using 3D design software
	Design user-friendly, immersive user interfaces and experiences within virtual environments
	Improve the efficiency and performance of Virtual Reality applications to ensure a smooth experience
	Perform both maintenance and upgrades required for Virtual Reality systems, ensuring their optimal performance

Civil Liability Insurance

This institution's main concern is to guarantee the safety of the students and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.



General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

1. TUTOR: During the Hybrid Professional Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

3. ABSENCE: If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

4. CERTIFICATION: Professionals who pass the Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: the Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

7. DOES NOT INCLUDE: The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

08

Where Can I Do the Internship?

TECH's main premise is to provide top quality university degrees, which is why it carefully selects the institutions available for students to carry out their practical training. Thanks to this, engineers will have the opportunity to carry out their Internship Program in organizations of international prestige and in environments of excellence. In this way, graduates will be part of a work team made up of experts in Digital Transformation and Industry 4.0.

You will join a team made up of experienced professionals in the field of Digital Transformation and Industry 4.0”

The student will be able to complete the practical part of this Hybrid Professional Master's Degree at the following centers:

Captia Ingeniería

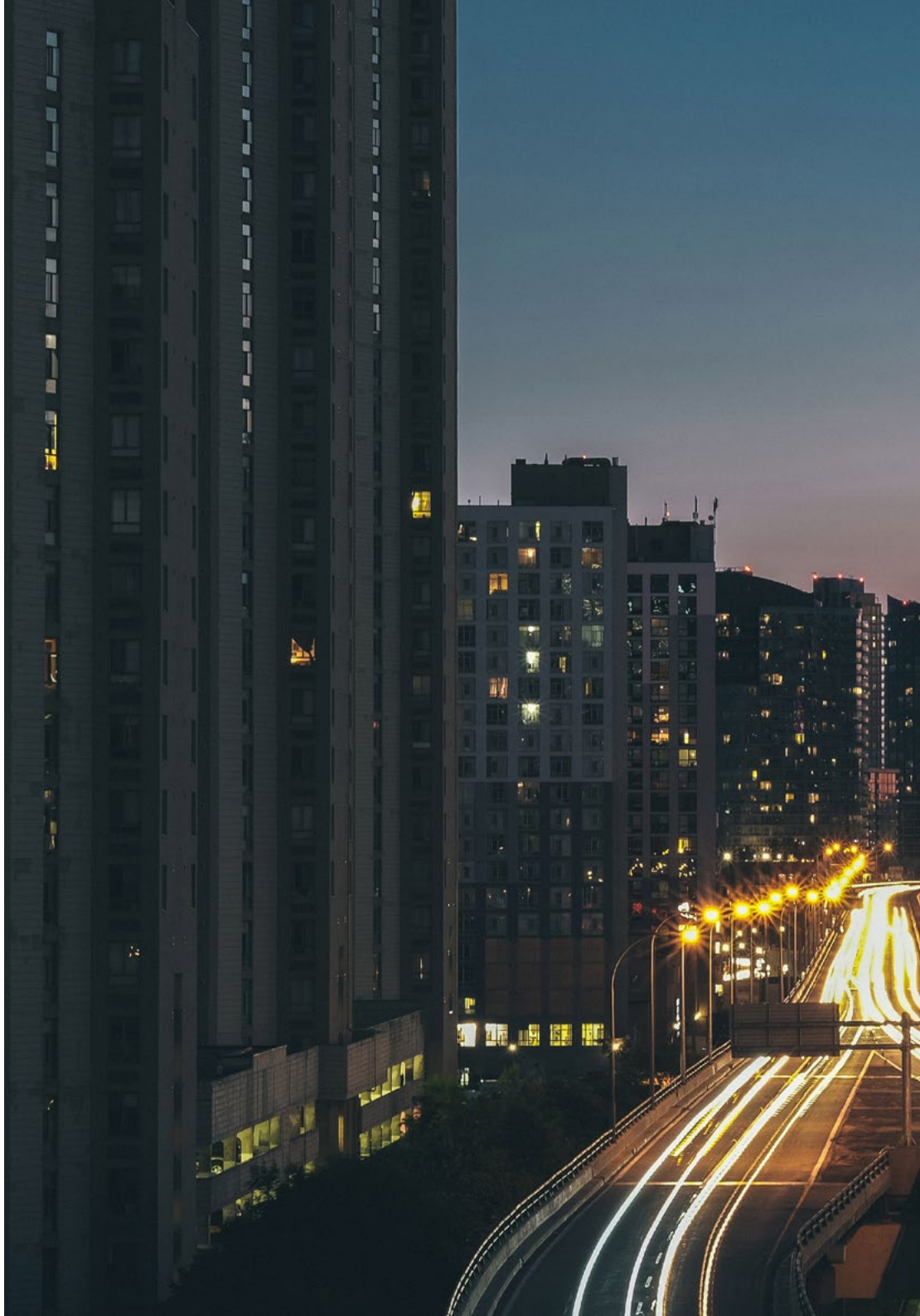
Country
Spain

City
Madrid

Address: Av. de las Nieves, 37, Bloque A Planta 1 Oficina E, 28935, Móstoles, Madrid

IT company dedicated to providing advanced technological solutions to industries.

Related internship programs:
- Visual Analytics and Big Data
- Software Development



Boost your career path with holistic teaching, allowing you to advance both theoretically and practically"

09

Methodology

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

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

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

Case Study to contextualize all content

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

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

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

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

A learning method that is different and innovative

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

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

The case method is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

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

Relearning Methodology

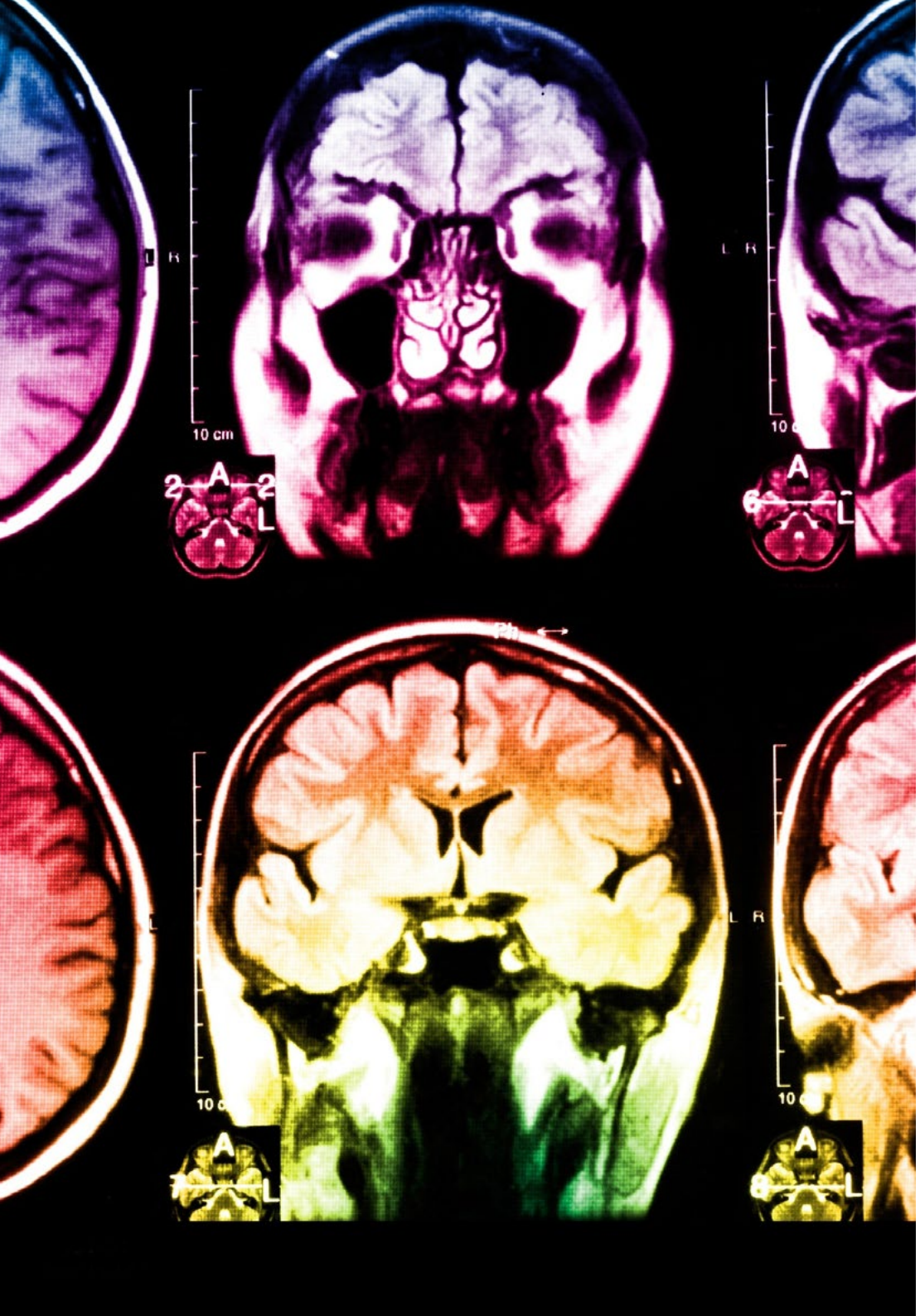
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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

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

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

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



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

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

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

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

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

Study Material

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

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

Classes

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

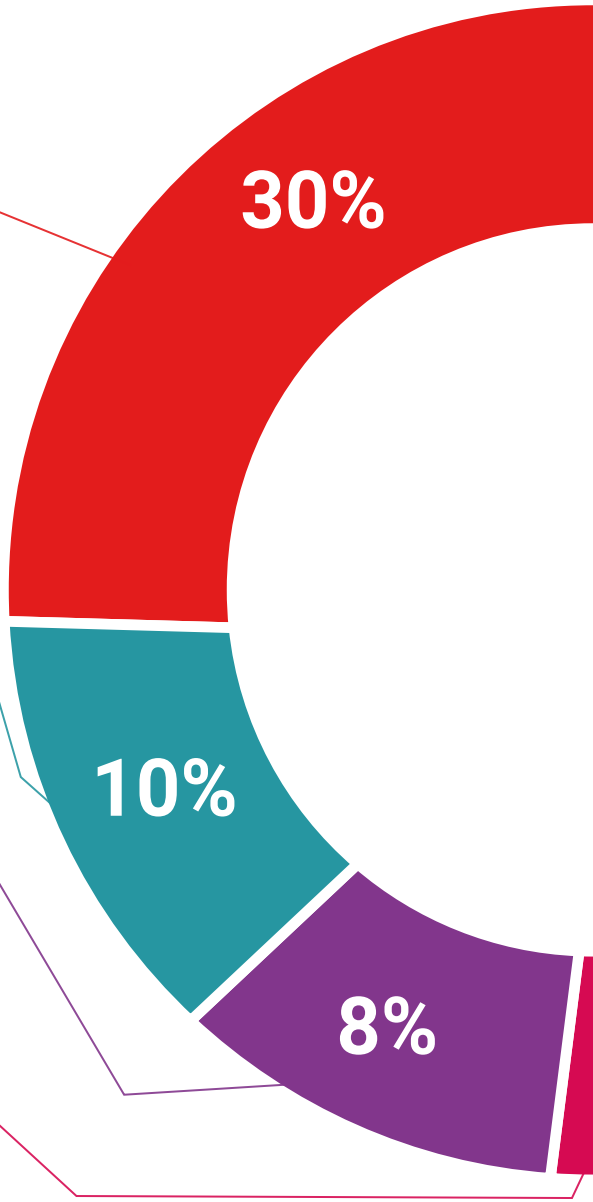
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

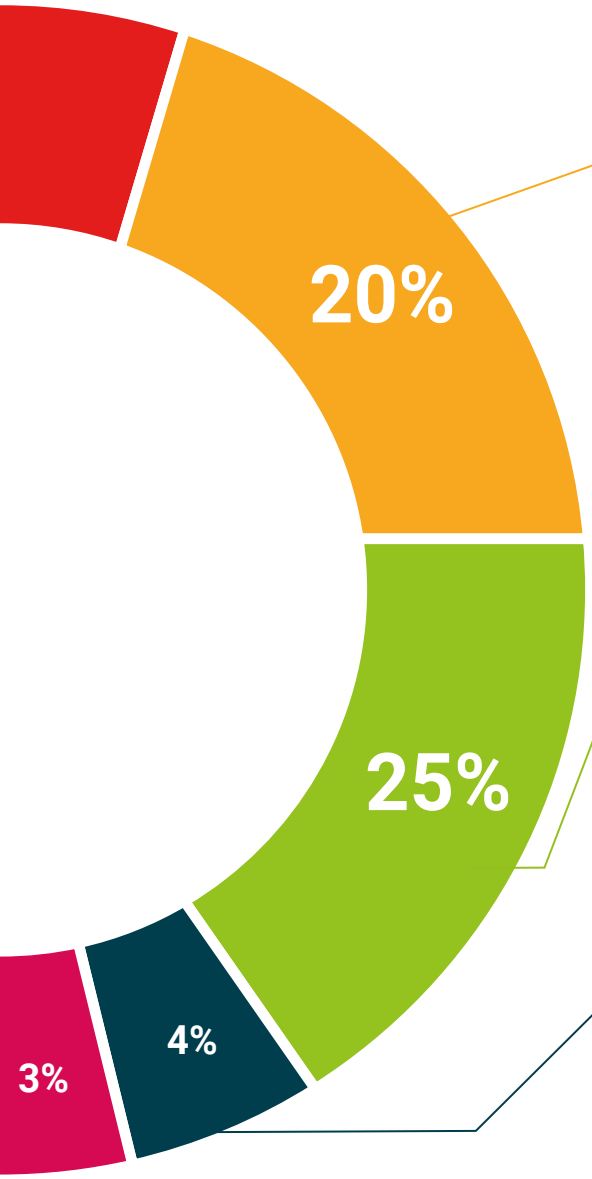
Practising Skills and Abilities

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

Additional Reading

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





Case Studies

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

Interactive Summaries

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

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

Testing & Retesting

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

10

Certificate

The Hybrid Professional Master's Degree in Digital Transformation and Industry 4.0 guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Professional Master's Degree issued by TECH Global University.

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

This private qualification will allow you to obtain a **Hybrid Professional Master's Degree in Digital Transformation and Industry 4.0** 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: **Hybrid Professional Master's Degree in Digital Transformation and Industry 4.0**

Modality: **Hybrid (Online + Internship)**

Duration: **12 months**

Accreditation: **60 + 4 ECTS**

tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Hybrid Professional Master's Degree in Digital Transformation and Industry 4.0

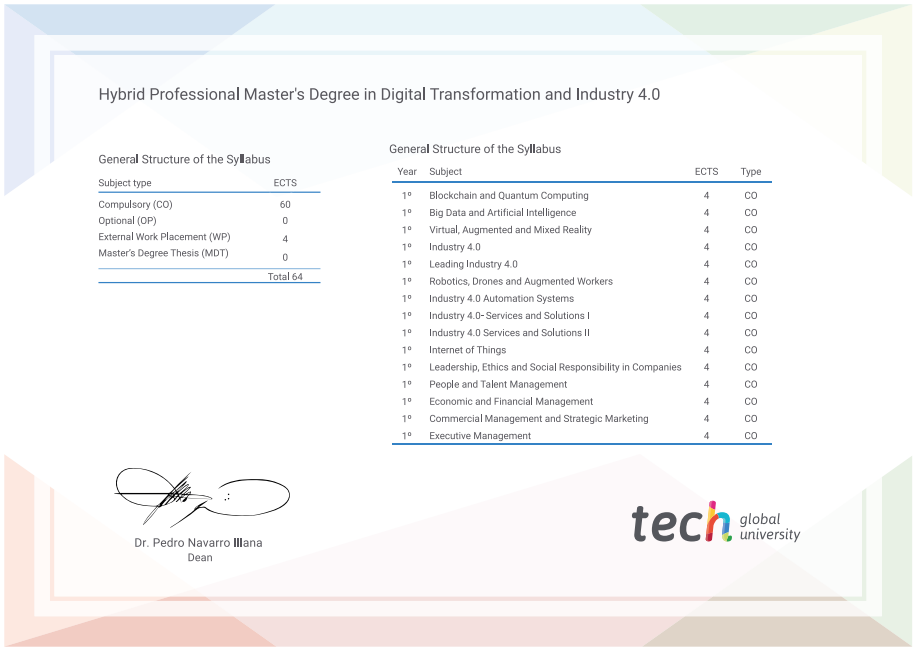
This is a private qualification of 1,920 hours of duration equivalent to 64 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
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



Hybrid Professional Master's Degree in Digital Transformation and Industry 4.0

General Structure of the Syllabus

Subject type	ECTS
Compulsory (CO)	60
Optional (OP)	0
External Work Placement (WP)	4
Master's Degree Thesis (MDT)	0
	Total 64

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Blockchain and Quantum Computing	4	CO
1º	Big Data and Artificial Intelligence	4	CO
1º	Virtual, Augmented and Mixed Reality	4	CO
1º	Industry 4.0	4	CO
1º	Leading Industry 4.0	4	CO
1º	Robotics, Drones and Augmented Workers	4	CO
1º	Industry 4.0 Automation Systems	4	CO
1º	Industry 4.0- Services and Solutions I	4	CO
1º	Industry 4.0 Services and Solutions II	4	CO
1º	Internet of Things	4	CO
1º	Leadership, Ethics and Social Responsibility in Companies	4	CO
1º	People and Talent Management	4	CO
1º	Economic and Financial Management	4	CO
1º	Commercial Management and Strategic Marketing	4	CO
1º	Executive Management	4	CO

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Dean

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*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.

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Hybrid Professional Master's Degree

Digital Transformation and Industry 4.0

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Hybrid Professional Master's Degree
Digital Transformation and Industry 4.0

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