Advanced Master's Degree

Information Systems Management (Chief Information Officer)

AMDISM

tech technological university

tech technological university

Advanced Master's Degree
Information Systems Management (Chief Information Officer)

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

Website: **www.techtitute.com/in/school-of-business/advanced-master-degree/advanced-master-degree-information-systems-management-chief-information-officer**

Index

01

Welcome

New technologies have been introduced in the field of business to improve production processes, decision-making, communication, and advertising... In short, to improve work and achieve a competitive advantage over other companies. However, in addition to having the appropriate infrastructure and software, it is necessary to have qualified professionals who are capable of managing and leading projects based on the information systems that best suit the company's objectives. At this point, the figure of the director of this area plays a fundamental role, since he/she will be the person in charge of designing and planning the actions based on information technologies that must be implemented. Business professionals, on the other hand, are increasingly interested in specializing in this field, as it is an area that is acquiring great importance in companies, making their advanced training in this field indispensable.

Advanced Master's Degree in Information Systems Management (Chief Information Officer).
TECH Technological University

Learn firsthand the importance of new technologies applied to the company and become a successful CIO"

02

Why Study at TECH?

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

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

At TECH Technological University

Innovation

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

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

The Highest Standards

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

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

Networking

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

100,000+
executives trained each year

200+
different nationalities

Empowerment

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

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

Talent

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

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

Multicultural Context

While studying at TECH, students will enjoy a unique experience. 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 studies in the academic community"

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

Analysis

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

Academic Excellence

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

Economy of Scale

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

03

Why Our Program?

Studying this TECH program means increasing the chances of achieving professional success in senior business management.

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

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

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

01

A significant career boost

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

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

02

Develop a strategic and global vision of companies

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

Our global vision of companies will improve your strategic vision.

03

Consolidate the student's senior management skills

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

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

04

Take on new responsibilities

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

45% of graduates are promoted internally.

05

Access to a powerful network of contacts

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

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

06

Thoroughly develop business projects

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

20% of our students develop their own business idea.

07

Improve soft skills and management skills

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

Improve your communication and leadership skills and enhance your career.

08

Be part of an exclusive community

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

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

04

Objectives

This Advanced Master's Degree in Information Systems Management (Chief Information Officer) has been designed with the need for business professionals to specialize in this field in mind. Thus, students will find a multitude of theoretical and practical resources that will be essential to develop the necessary skills with which to act more safely and effectively in their daily practice. Undoubtedly, a program that will mark a before and after in your career and that will be the ideal complement to your basic training.

A unique program with which you will be able to develop your skills to successfully manage information systems management"

Your goals are our goals.
We work together to help you achieve them.

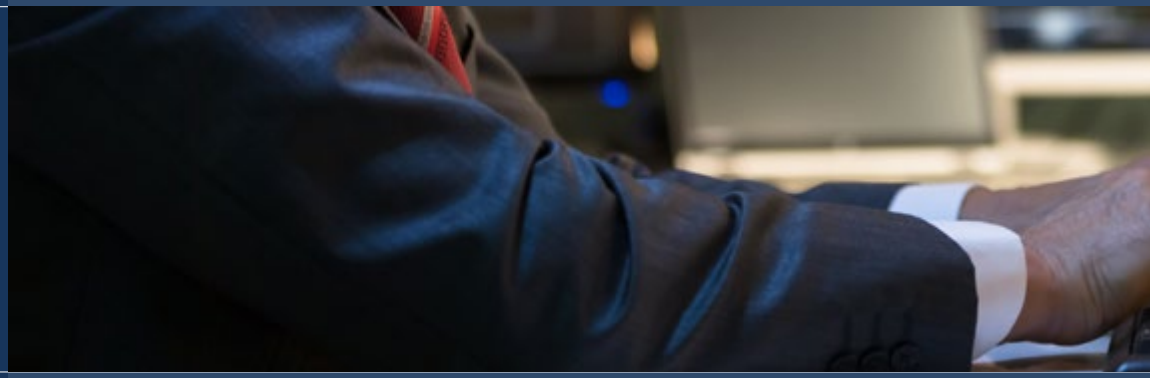
The **Advanced Master's Degree in Information Systems Management (Chief Information Officer)** will enable students to:

01 Develop strategies to carry out decision-making in a complex and unstable environment

02 Create corporate strategies that set the script for the company to follow in order to be more competitive and achieve its own objectives

03 To develop the skills required to manage business activities strategically

04 Design innovative strategies and policies to improve management and business efficiency



05 Understand the best way to manage the company's human resources, getting greater performance from employees that, in turn, increases the company's profits

06 Acquire the communication skills that a business leader needs in order to ensure that their message is heard and understood by the members of their community

07 Understand the economic environment in which the company operates and develop appropriate strategies to anticipate changes

08 Be able to manage the company's economic and financial plan

09 Understand the logistical operations that are necessary in the business environment, so as to manage them appropriately

10 Be able to apply information and communication technologies to the different areas within a company

11 Learn the concepts related to energy, its types, measurements, conservation and units

12 Know the history of computers, as well as the main types of existing organizations and architectures

13 Understand the operation of the memory hierarchy, the different types of storage and input/output issues

14 Learn about the interface and implementation of operating systems, understanding the concepts of files, file systems, directory structure and their implementation, as well as the methods of allocation and management of free space

15 Deepen the knowledge of operating systems, their functions, process management, memory, directories and files, as well as the keys to their security and design objectives

16 Know the main free tools available in different areas such as operating systems, business management, content management systems and multimedia content creation, among others

17 Know the different network security mechanisms, as well as the different Internet security protocols

18 Knowledge of the different mobile technologies and services currently available in the market

19 Understand the fundamentals of symmetric cryptography and asymmetric cryptography, as well as their main algorithms

20 Acquire the essential concepts related to information systems in the enterprise, as well as identify the opportunities and needs of information systems in the enterprise

05

Skills

Business professionals are people with multidisciplinary training, especially in the case of managers, as they usually have advanced knowledge in different areas such as finance, communication and logistics. However, with the advance of new technologies, it is increasingly important that they specialize in information systems, so that they are able to manage them properly. This Advanced Master's Degree is designed to help you develop the necessary skills in this field so that you can work as efficiently and safely as possible.

This program will allow you to develop the necessary skills to correctly manage your company's information systems"

01 Correctly manage teams to improve productivity and, therefore, the company's profits

02 Carry out the economic and financial control of the company

03 Control the company's logistics processes, as well as purchasing and procurement

04 Delve into the new business models associated with information systems

05 Apply the most appropriate strategies to support e-commerce of the company's products

06 Develop and lead marketing plans

07 Focus on innovation in all processes and areas of the company

08 Lead the different projects in a company

09 Master the concepts of fields, waves and electromagnetism, electric circuit theory, electronic circuits, physical principle of semiconductors and logic families, among others, to solve possible problems related to these areas

10 Know, understand and evaluate the structure and architecture of computers

11 Know the structure, organization, operation and interconnection of computer systems

12 Perform programming of computers, operating systems, databases and software

13 Understanding operating systems and designing applications for their services

14 Know and understand the main characteristics of free software

15 Know the characteristics of computer networks and perform applications associated with them

16 Use tools to store, process and access information systems

17 Knowledge of possible network attacks and security systems to prevent them

18 Know the information systems in the company

06

Structure and Content

This Advanced Master's Degree from TECH is a completely new program, as it includes, in the same syllabus, the most relevant aspects of business management and computer systems. In this way, students will be able to acquire a higher qualification that will be fundamental for their professional development. And They will achieve this thanks to the quality of the syllabus and the multitude of theoretical and practical resources that will make their learning much easier.

Thanks to this complete syllabus you will be able to carry out a contextual study of the latest concepts in Information Systems Management"

Syllabus

The Advanced Master's Degree in Information Systems Management (Chief Information Officer) at TECH Technological University is an intensive program that prepares students to face business challenges and decisions both nationally and internationally. Its content is designed to promote the development of managerial skills that enable more rigorous decision-making in uncertain environments.

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

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

A plan designed for students, focused on their professional improvement and that prepares them to achieve excellence in the field of Information Systems Management. A program that understands your needs and those of your company through innovative content based on the latest trends, and supported by the best educational methodology and an exceptional faculty, which will provide you with the competencies to solve critical situations in a creative and efficient way.

This program is developed over 2 years and is divided into 18 modules:

Module 1	Leadership, Ethics, and CSR
Module 2	Strategic Management and Executive Management
Module 3	People and Talent Management
Module 4	Economic and Financial Management
Module 5	Operations and Logistics Management
Module 6	Information Systems Management
Module 7	Commercial Management, Marketing, and Corporate Communication
Module 8	Innovation and Project Management
Module 9	Physical Fundamentals of Computing
Module 10	Computer Technology
Module 11	The Structure of Computers
Module 12	Operating Systems
Module 13	Advanced Operating System
Module 14	Free Software and Open Knowledge
Module 15	Computer Networks
Module 16	Emerging Technologies
Module 17	Information Systems Security
Module 18	Systems Integration

Where, When and How is it Taught?

TECH Offers the Student the possibility of developing this program in a totally online way. Over the 2 years of training, you will be able to access all the contents of this program at any time, which will allow you to self-manage your study time.

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

Module 1. Leadership, Ethics, and CSR.

1.1. Globalization and Governance
1.1.1. Globalization and Trends: Internationalization of Markets
1.1.2. Economic Environment and Corporate Governance
1.1.3. Accountability

1.2. Leadership
1.2.1. Intercultural Environment
1.2.2. Leadership and Business Management
1.2.3. Management Roles and Responsibilities

1.3. Business ethics
1.3.1. Ethics and Integrity
1.3.2. Ethical Behavior in Companies
1.3.3. Deontology, Codes of Ethics and Codes of Conduct
1.3.4. Fraud and Corruption Prevention

1.4. Sustainability
1.4.1. Business and Sustainable Development
1.4.2. Social, Environmental, and Economic Impact
1.4.3. Agenda 2030 and SDGs

1.5. Corporate Social Responsibility
1.5.1. Corporate Social Responsibility
1.5.2. Roles and Responsibilities
1.5.3. Implementing Corporate Social Responsibility

Module 2. Strategic Management and Executive Management

2.1. Organizational Analysis and Design
2.1.1. Organizational Culture
2.1.2. Organisational analysis
2.1.3. Designing the Organizational Structure

2.2. Corporate Strategy
2.2.1. Corporate Level Strategy
2.2.2. Types of Corporate Level Strategies
2.2.3. Determining the Corporate Strategy
2.2.4. Corporate Strategy and Reputational Image

2.3. Strategic Planning and Formulation
2.3.1. Strategic Thinking
2.3.2. Strategic Planning and Formulation
2.3.3. Sustainability and Corporate Strategy

2.4. Strategic Models and Patterns
2.4.1. Wealth, Value, and Return on Investments
2.4.2. Corporate Strategy: Methodologies
2.4.3. Growing and Consolidating the Corporate Strategy

2.5. Strategic Management
2.5.1. Strategic Mission, Vision, and Values
2.5.2. Balanced Scorecard
2.5.3. Analyzing, Monitoring, and Evaluating the Corporate Strategy
2.5.4. Strategic Management and Reporting

2.6. Implementing and Executing Strategy
2.6.1. Strategic implementation: objectives, actions and impacts
2.6.2. Strategic Alignment and Supervision
2.6.3. Continuous Improvement Approach

2.7. Executive Management
2.7.1. Integrating Functional Strategies into the Global Business Strategies
2.7.2. Management Policy and Processes
2.7.3. Knowledge Management

2.8. Analyzing and Solving Cases/ Problems
2.8.1. Problem Solving Methodology
2.8.2. Case Method
2.8.3. Positioning and Decision-Making

Module 3. People and Talent Management

3.1. Organizational Behavior
3.1.1. Organizational Theory
3.1.2. Key Factors for Change in Organizations
3.1.3. Corporate Strategies, Types, and Knowledge Management

3.2. Strategic People Management
3.2.1. Job Design, Recruitment, and Selection
3.2.2. Human Resources Strategic Plan: Design and Implementation
3.2.3. Job Analysis: Design and Selection of People
3.2.4. Training and Professional Development

3.3. Management and Leadership Development
3.3.1. Management Skills: 21st Century Competencies and Abilities
3.3.2. Non-Managerial Skills
3.3.3. Map of Skills and Abilities
3.3.4. Leadership and People Management

3.4. Change Management
3.4.1. Performance Analysis
3.4.2. Strategic Approach
3.4.3. Change Management: Key Factors, Process Design and Management
3.4.4. Continuous Improvement Approach

3.5. Negotiation and Conflict Management
3.5.1. Negotiation Objectives Differentiating Elements
3.5.2. Effective Negotiation Techniques
3.5.3. Conflicts: Factors and Types
3.5.4. Efficient Conflict Management: Negotiation and Communication

3.6. Executive Communication
3.6.1. Performance Analysis
3.6.2. Leading Change. Resistance to Change
3.6.3. Managing Change Processes
3.6.4. Managing Multicultural Teams

3.7. Team Management and People Performance
3.7.1. Multicultural and Multidisciplinary Environment
3.7.2. Team and People Management
3.7.3. Coaching and People Performance
3.7.4. Management Meetings: Planning and Time Management

3.8. Knowledge and Talent Management
3.8.1. Identifying Knowledge and Talent in Organizations
3.8.2. Corporate Knowledge and Talent Management Models
3.8.3. Creativity and Innovation

Module 4. Economic and Financial Management

4.1. Economic Environment
4.1.1. Organizational Theory
4.1.2. Key Factors for Change in Organizations
4.1.3. Corporate Strategies, Types, and Knowledge Management

4.2. Executive Accounting
4.2.1. International Accounting Framework
4.2.2. Introduction to the Accounting Cycle
4.2.3. Company Financial Statements
4.2.4. Analysis of Financial Statements: Decision-Making

4.3. Budget and Management Control
4.3.1. Budgetary Planning
4.3.2. Management Control: Design and Objectives
4.3.3. Supervision and *Reporting*

4.4. Corporate Tax Responsibility
4.4.1. Corporate Tax Responsibility
4.4.2. Tax Procedure: A Country-case Approach

4.5. Corporate Control Systems
4.5.1. Types of Control
4.5.2. Legal/Regulatory *Compliance*
4.5.3. Internal Auditing
4.5.4. External Auditing

4.6. Financial Management
4.6.1. Introduction to Financial Management
4.6.2. Financial Management and Corporate Strategy
4.6.3. Chief Financial Officer (CFO): Managerial Skills

4.7. Financial Planning
4.7.1. Business Models and Financing Needs
4.7.2. Financial Analysis Tools
4.7.3. Short-Term Financial Planning
4.7.4. Long-Term Financial Planning

4.8. Corporate Financial Strategy
4.8.1. Corporate Financial Investments
4.8.2. Strategic Growth: Types

4.9. Macroeconomic Context
4.9.1. Macroeconomic Analysis
4.9.2. Economic Indicators
4.9.3. Economic Cycle

4.10. Strategic Financing
4.10.1. Banking Business: Current Environment
4.10.2. Risk Analysis and Management

4.11. Money and Capital Markets
4.11.1. Fixed Income Market
4.11.2. Equity Market
4.11.3. Valuation of Companies

4.12. Analyzing and Solving Cases/ Problems
4.12.1. Problem Solving Methodology
4.12.2. Case Method

Module 5. Operations and Logistics Management

5.1. Operations Management
5.1.1. Define the Operations Strategy
5.1.2. Supply Chain Planning and Control
5.1.3. Indicator Systems

5.2. Purchasing Management
5.2.1. Stocks Management
5.2.2. Warehouse Management
5.2.3. Purchasing and Procurement Management

5.3. Supply Chain Management (1)
5.3.1. Costs and Efficiency of the Operations Chain
5.3.2. Change in Demand Patterns
5.3.3. Change in Operations Strategy

5.4. Supply Chain Management (2). Implementation
5.4.1. Lean Manufacturing/Lean Thinking
5.4.2. Logistics Management
5.4.3. Purchasing

5.5. Logistical Processes
5.5.1. Organization and Management by Processes
5.5.2. Procurement, Production, Distribution
5.5.3. Quality, Quality Costs, and Tools
5.5.4. After-Sales Service

5.6. Logistics and Customers
5.6.1. Demand Analysis and Forecasting
5.6.2. Sales Forecasting and Planning
5.6.3. Collaborative Planning, Forecasting, and Replacement

5.7. International Logistics
5.7.1. Customs, Export and Import processes
5.7.2. Methods and Means of International Payment
5.7.3. International Logistics Platforms

5.8. Competing through Operations
5.8.1. Innovation in Operations as a Competitive Advantage in the Company
5.8.2. Emerging Technologies and Sciences
5.8.3. Information Systems in Operations

Module 6. Information Systems Management

6.1. Information Systems Management
6.1.1. Business Information Systems
6.1.2. Strategic Decisions
6.1.3. The Role of the CIO

6.2. Information Technology and Business Strategy
6.2.1. Company and Industry Sector Analysis
6.2.2. Online Business Models
6.2.3. The Value of IT in a Company

6.3. IS Strategic Planning
6.3.1. The Process of Strategic Planning
6.3.2. Formulating the IS Strategy
6.3.3. Strategy Implementation Plan

6.4. Information Systems and Business Intelligence
6.4.1. CRM and Business Intelligence
6.4.2. Business Intelligence Project Management
6.4.3. Business Intelligence Architecture

6.5. New ICT-Based Business Models
5.5.1. Technology-Based Business Models
5.5.2. Innovation Abilities
5.5.3. Redesigning the Value Chain Processes

6.6. E-Commerce
6.6.1. E-Commerce Strategic Plan
6.6.2. ogistics Management and Customer Service in E-Commerce
6.6.3. E-Commerce as an Opportunity for Internationalization

6.7. E-Business Strategies
6.7.1. Social Media Strategies
6.7.2. Optimizing Service Channels and Customer Support
6.7.3. Digital Regulation

6.8. Digital Business
6.8.1. Mobile E-Commerce
6.8.2. Design and Usability
6.8.3. E-Commerce Operations

Module 7. Commercial Management, Marketing, and Corporate Communications

7.1. Commercial Management
7.1.1. Sales Management
7.1.2. Commercial Strategy
7.1.3. Sales and Negotiation Techniques
7.1.4. Management of Sales Teams

7.2. Marketing
7.2.1. Marketing and the Impact on the Company
7.2.2. Basic Marketing Variables
7.2.3. Marketing Plan

7.3. Strategic Marketing Management
7.3.1. Sources of Innovation
7.3.2. Current Trends in Marketing
7.3.3. Marketing Tools
7.3.4. Marketing Strategy and Communication with Customers

7.4. Digital Marketing Strategy
7.4.1. Approach to Digital Marketing
7.4.2. Digital Marketing Tools
7.4.3. Inbound Marketing and the Evolution of Digital Marketing

7.5. Sales and Communication Strategy
7.5.1. Positioning and Promotion
7.5.2. Public Relations
7.5.3. Sales and Communication Strategy

7.6. Corporate Communication
7.6.1. Internal and External Communication
7.6.2. Communication Departments
7.6.3. Communication Managers: Managerial Skills and Responsibilities

7.7. Corporate Communication Strategy
7.7.1. Corporate Communication Strategy
7.7.2. Communication Plan
7.7.3. Press Release/Clipping/Publicity Writing

Module 8. Innovation and Project Management

8.1. Innovation
8.1.1. Macro Concept of Innovation
8.1.2. Types of Innovation
8.1.3. Continuous and Discontinuous Innovation
8.1.4. Training and Innovation

8.2. Innovation Strategy
8.2.1. Innovation and Corporate Strategy
8.2.2. Global Innovation Project: Design and Management
8.2.3. Innovation Workshops

8.3. Business Model Design and Validation
8.3.1. The Lean Start-up Methodology
8.3.2. Innovative Business Initiative: Stages
8.3.3. Financing Arrangements
8.3.4. Model Tools: Empathy Map, Canvas Model, and Metrics
8.3.5. Growth and Loyalty

8.4. Project Management
8.4.1. Innovation Opportunities
8.4.2. Feasibility Study and Proposal Specification
8.4.3. Project Definition and Design
8.4.4. Project Execution
8.4.5. Project Closure

Module 9. Physical Fundamentals of Computing

9.1. Fundamental Forces
9.1.1. Newton's Second Law
9.1.2. The Fundamental Forces of Nature
9.1.3. Gravitational Force
9.1.4. The Electric Force

9.2. Conservation Laws
9.2.1. What is Mass?
9.2.2. The Electric Charge
9.2.3. The Millikan Experiment
9.2.4. Conservation of Linear Momentum

9.3. Energy
9.3.1. What is Energy?
9.3.2. Measuring Energy
9.3.3. Energy Types
9.3.4. Dependence on the Observer's Energy
9.3.5. Potential Energy
9.3.6. Derivation of Potential Energy
9.3.7. Energy Conservation
9.3.8. Energy Units

9.4. Electric Field
9.4.1. Static Electricity
9.4.2. Electric Field
9.4.3. Capacity
9.4.4. Potential

9.5. Electrical Circuits
9.5.1. Circulation of Electric Charge
9.5.2. Batteries
9.5.3. Alternating Current

9.6. Magnetism
9.6.1. Introduction and Magnetic Materials
9.6.2. Magnetic Field
9.6.3. Electromagnetic Introduction

9.7. Electromagnetic Spectrum
9.7.1. Maxwell's Equations
9.7.2. Optics and Electromagnetic Waves
9.7.3. The Michelson Morley Experiment

9.8. The Atom and Subatomic Particles
9.8.1. The Atom
9.8.2. The Atomic Nucleus
9.8.3. Radioactivity

9.9. Quantum Physics
9.9.1. Color and Heat
9.9.2. Photoelectric Effect
9.9.3. Matter Waves
9.9.4. Nature as Probability

9.10. Relativity
9.10.1. Gravity, Space and Time
9.10.2. Lorentz Transformations
9.10.3. Speed and Time
9.10.4. Energy, Momentum and Mass

Module 10. Computer Technology

10.1. General Information and a Brief History of Computers
10.1.1. Organization and Architecture
10.1.2. Brief History of Computers

10.2. Computer Arithmetic
10.2.1. The Arithmetic-Logic Unit
10.2.2. Numbering Systems
10.2.3. Integer Representation
10.2.4. Arithmetic with Integers
10.2.5. Floating Point Representation
10.2.6. Floating Point Arithmetic

10.3. Classic Concepts of Logic Design
10.3.1. Boolean Algebra
10.3.2. Logic Gates
10.3.3. Logical Simplification
10.3.4. Combinational Circuits
10.3.5. Sequential Circuits
10.3.6. Concept of Sequential Machine
10.3.7. Memory Element
10.3.8. Types of Memory Elements
10.3.9. Synthesis of Sequential Circuits
10.3.10. Synthesis of Sequential Circuits with PLA

10.4. Basic Computer Organization and Operation
10.4.1. Introduction
10.4.2. Components of a Computer
10.4.3. Operation of a Computer
10.4.4. Interconnection Structures
10.4.5. Interconnection with Buses
10.4.6. PCI Bus

10.5. Internal Memory
10.5.1. Introduction to Memory Systems in Computers
10.5.2. Semiconductor Main Memory
10.5.3. Correction of Errors
10.5.4. Advanced DRAM Memory Organization

10.6. Input/Output
10.6.1. External Devices
10.6.2. Input/Output Modules
10.6.3. Scheduled Input/Output
10.6.4. Input/Output via Interrupts
10.6.5. Direct Memory Access
10.6.6. Input/Output Channels and Processors

10.7. Machine Instructions: Features and Functions
10.7.1. Characteristics of Machine Instructions
10.7.2. Types of Operands
10.7.3. Types of Operations
10.7.4. Assembly Language
10.7.5. Address
10.7.6. Formats of Instructions

10.8. Processor Structure and Operation
10.8.1. Processor Organization
10.8.2. Record Organization
10.8.3. Training Cycle
10.8.4. Instruction Segmentation

10.9. Cache and External Memory
10.9.1. Basic Principles of Cache Memories
10.9.2. Cache Design Elements
10.9.3. Magnetic Disks
10.9.4. RAID
10.9.5. Optical Memory
10.9.6. Magnetic Tape

10.10. Introduction to the Operation of the Control Unit
10.10.1. Microoperations
10.10.2. Processor Control
10.10.3. Wired Implementation

Module 11. The Structure of Computers

11.1. Fundamentals of Computer Design and Evolution
11.1.1. Definition of Computer Architecture
11.1.2. Evolution and Performance of Architectures
11.1.3. Parallel Architectures and Levels of Parallelism

11.2. Computer Performance Evaluation
11.2.1. Performance Measures
11.2.2. Test Programs (benchmarks)
11.2.3. Improved Performance
11.2.4. Costs of a Computer

11.3. Leveraging the Memory Hierarchy
11.3.1. Memory Hierarchy
11.3.2. Basic Concepts of the Cache
11.3.3. Cache Evaluation and Improvements
11.3.4. Virtual Memory

11.4. Storage and Other Input/Output Aspects
11.4.1. Reliability, Dependability and Availability
11.4.2. Disk Storage
11.4.3. Flash Storage
11.4.4. Connection and Information Transfer Systems

11.5. Segmented Processors
11.5.1. What are Segmented Processors?
11.5.2. Principles of Segmentation and Performance Enhancement
11.5.3. Segmented Processor Design
11.5.4. Optimization of Functional Channels
11.5.5. Interrupt Handling on a Segmented Processor

11.6. Superscalar Processors
11.6.1. What are Superscalar Processors?
11.6.2. Parallelism between Instructions and Machine Parallelism
11.6.3. Superscalar Instruction Processing
11.6.4. Jump Instruction Processing
11.6.5. Interrupt Handling on a Superscalar Processor

11.7. VLIW Processors
11.7.1. What are VLIW Processors?
11.7.2. Exploiting Parallelism in VLIW Architectures
11.7.3. Compiler Support Resources

11.8. Vector Processors
11.8.1. What are Vector Processors?
11.8.2. Vector Architecture
11.8.3. The Memory System in Vector Processors
11.8.4. Performance Measurements on Vector Processors
11.8.5. Vector Processing Efficiency

11.9. Parallel Computers
11.9.1. Parallel Architectures and Levels of Parallelism
11.9.2. Motivation to the Study of Parallel Computers
11.9.3. Design Space. Classification and General Structure
11.9.4. Performance on Parallel Computers
11.9.5. Classification of Communication Systems in Parallel Computers
11.9.6. General Structure of the Communication System in Parallel Computers
11.9.7. The Network Interface in Parallel Computers
11.9.8. The Interconnection Network in Parallel Computers
11.9.9. Communication System Performance on Parallel Computers

11.10. Interconnection Networks and Multiprocessors
11.10.1. Topology and Types of Interconnection Networks
11.10.2. Switching in Interconnection Networks
11.10.3. Flow Control in Interconnection Networks
11.10.4. Routing in Interconnection Networks
11.10.5. Memory System Coherence on Multiprocessors
11.10.6. Multiprocessor Memory Consistency
11.10.7. Multiprocessor Synchronization

Module 12. Operating Systems

12.1. Introduction to Operating Systems
12.1.1. Concept
12.1.2. Historical Recap
12.1.3. Fundamental Building Blocks of Operating Systems
12.1.4. Objectives and Functions of Operating Systems

12.2. Structure of Operating Systems
12.2.1. Operating System Services
12.2.2. Operating System User Interface
12.2.3. System Calls
12.2.4. Types of System Calls

12.3. Process Planning
12.3.1. Basic Concepts
12.3.2. Planning Criteria
12.3.3. Planning Algorithms

12.4. Processes and Threads
12.4.1. Process Concept
12.4.2. Thread Concept
12.4.3. Process Status
12.4.4. Process Control

12.5. Concurrence. Mutual Exclusion, Synchronization, and Interlocking
12.5.1. Principles of Concurrence
12.5.2. Mutual Exclusion
12.5.3. Traffic Lights
12.5.4. Monitors
12.5.5. Message Passing
12.5.6. Fundamentals of Interlocking
12.5.7. Interlock Prevention
12.5.8. Interlock Avoidance
12.5.9. Interlock Detection and Recovery

12.6. Memory Management
12.6.1. Memory Management Requirements
12.6.2. Process Memory Model
12.6.3. Contiguous Assignment Scheme
12.6.4. Segmentation
12.6.5. Pagination
12.6.6. Segmented Pagination

12.7. Virtual Memory
12.7.1. Virtual Memory Fundamentals
12.7.2. Life Cycle of a Page
12.7.3. Virtual Memory Management Policy
12.7.4. Localization Policy
12.7.5. Extraction Policy
12.7.6. Replacement Policy

12.8. Input/Output System
12.8.1. Input/Output Devices
12.8.2. Input/Output System Organization
12.8.3. Use of Buffers
12.8.4. Magnetic Disk

12.9. File System Interface and Implementation
12.9.1. Archiving Concept
12.9.2. Access Methods
12.9.3. Directory Structure
12.9.4. Structure of a File System
12.9.5. File System Interface and Implementation
12.9.6. Directories System Interface and Implementation
12.9.7. Allocation Methods
12.9.8. Management of Free Space

12.10. Protection
12.10.1. Objectives
12.10.2. Authentication
12.10.3. Authorization
12.10.4. Cryptography

Module 13. Advanced Operating System

13.1. Concept of System Operations
13.1.1. Operating System Functions
13.1.2. Process Management
13.1.3. Memory Management
13.1.4. Directory and File Management
13.1.5. The Shell: Interactivity
13.1.6. Security/Safety
13.1.7. Design Objectives

13.2. History of Operating Systems
13.2.1. The First Generation
13.2.2. The Second Generation
13.2.3. Third Generation
13.2.4. Fourth Generation
13.2.5. The OS/2 Case
13.2.6. The History of GNU/Linux
13.2.7. The History of Windows

13.3. Structure of an Operating System
13.3.1. Monolithic Systems
13.3.2. Layered Systems
13.3.3. Virtualisation
13.3.4. Exokernel
13.3.5. Client-server Model
13.3.6. Distributed Systems

13.4. System Calls
13.4.1. System Calls. Concepts
13.4.2. System Calls for Process Management
13.4.3. System Calls for File and Directory Administration
13.4.4. Calls to the Communication System

13.5. Windows and GNU/Linux
13.5.1. Windows Structure
13.5.2. Structure of GNU/Linux

13.6. The GNU/Linux Shell and PowerShell
13.6.1. The Command Interpreter
13.6.2. Using the Command Interpreter
13.6.3. GNU/Linux Commands
13.6.4. Basic PowerShell Syntax
13.6.5. Basic PowerShell Commands

13.7. Shell Programming
13.7.1. Script Programming
13.7.2. Syntax

13.8. System Programming in GNU/Linux
13.8.1. C Language under UNIX
13.8.2. Compilation Tools
13.8.3. Error Handling

13.9. System Calls on Files
13.9.1. Basic Calls
13.9.2. Calls on Directories
13.9.3. Advanced Calls

13.10. System Calls on Processes
13.10.1. Basic Calls
13.10.2. Signals
13.10.3. Pipelines

Module 14. Free Software and Open Knowledge

14.1. Introduction to Free Software
14.1.1. History of Free Software
14.1.2. "Freedom" in Software
14.1.3. Licenses for the Use of Software Tools
14.1.4. Intellectual Property of Software
14.1.5. What is the Motivation for Using Free Software?
14.1.6. Free Software Myths
14.1.7. Top 500

14.2. Open Knowledge and CC Licenses
14.2.1. Basic Concepts
14.2.2. Creative Commons Licenses
14.2.3. Other Content Licenses
14.2.4. Wikipedia and Other Open Knowledge Projects

14.3. Main Free Software Tools
14.3.1. Operating Systems
14.3.2. Office Applications
14.3.3. Business Management Applications
14.3.4. Web Content Managers
14.3.5. Multimedia Content Creation Tools
14.3.6. Other Applications

14.4. The Company: Free Software and its Costs
14.4.1. Free Software: Yes or No?
14.4.2. Truths and Lies about Free Software
14.4.3. Business Software Based on Free Software
14.4.4. Software Costs
14.4.5. Free Software Models

14.5. The GNU/Linux Operating System
14.5.1. Architecture
14.5.2. Basic Directory Structure
14.5.3. File System Characteristics and Structure
14.5.4. Internal Representation of the Files

14.6. The Android Mobile Operating System
14.6.1. History
14.6.2. Architecture
14.6.3. Android Forks
14.6.4. Introduction to Android Development
14.6.5. Frameworks for Mobile Application Development

14.7. Website Creation with WordPress
14.7.1. WordPress Features and Structure
14.7.2. Creation of Sites on WordPress.com
14.7.3. Installation and Configuration of WordPress on your own Server
14.7.4. Installing Plugins and Extending WordPress
14.7.5. Creation of WordPress Plugins
14.7.6. WordPress Theme Creation

14.8. Free Software Trends
14.8.1. Cloud Environments
14.8.2. Monitoring Tools
14.8.3. Operating Systems
14.8.4. Big Data and Open Data 2.0
14.8.5. Quantum Computing

14.9. Version Control
14.9.1. Basic Concepts
14.9.2. Git
14.9.3. Cloud and Self-hosted Git Services
14.9.4. Other Version Control Systems

14.10. Custom GNU/Linux Distributions
14.10.1. Main Distributions
14.10.2. Distributions Derived from Debian
14.10.3. Deb Package Creation
14.10.4. Modification of the Distribution
14.10.5. ISO Image Generation

Module 15. Computer Networks

15.1. Computer Networks on the Internet
15.1.1. Networks and Internet
15.1.2. Protocol Architecture

15.2. The Application Layer
15.2.1. Model and Protocols
15.2.2. FTP and SMTP Services
15.2.3. DNS Service
15.2.4. HTTP Operation Model
15.2.5. HTTP Message Formats
15.2.6. Interaction with Advanced Methods

15.3. The Transport Layer
15.3.1. Communication Between Processes
15.3.2. Connection-oriented Transportation: TCP and SCTP

15.4. The Network Layer
15.4.1. Circuit and Packet Switching
15.4.2. IP Protocol (v4 and v6)
15.4.3. Routing Algorithms

15.5. The Link Layer
15.5.1. Link Layer and Error Detection and Correction Techniques
15.5.2. Multiple Access Links and Protocols
15.5.3. Link Level Addressing

15.6. LAN Networks
15.6.1. Network Topologies
15.6.2. Network and Interconnection Elements

15.7. IP Addressing
15.7.1. IP Addressing and Subnetting
15.7.2. Overview: An HTTP Request

15.8. Wireless and Mobile Networks
15.8.1. 2G, 3G and 4G Mobile Networks and Services
15.8.2. 5G Networks

15.9. Network Security
15.9.1. Fundamentals of Communications Security
15.9.2. Access Control
15.9.3. System Security
15.9.4. Fundamentals of Cryptography
15.9.5. Digital Signature

15.10. Internet Security Protocols
15.10.1. IP Security and Virtual Private Networks (VPN)
15.10.2. Web Security with SSL/TLS

Module 16. Emerging Technologies

16.1. Mobile Technologies
16.1.1. Mobile Devices
16.1.2. Mobile Communications

16.2. Mobile Services
16.2.1. Types of Applications
16.2.2. Decision on the Type of Mobile Application
16.2.3. Mobile Interaction Design

16.3. Location-based Services
16.3.1. Location-Based Services
16.3.2. Technologies for Mobile Localization
16.3.3. GNSS-Based Localization
16.3.4. Accuracy and Accuracy in Localization Technologies
16.3.7. Beacons: Location by Proximity

16.4. User Experience (UX) Design
16.4.1. Introduction to User Experience (UX)
16.4.2. Technologies for Mobile Localization
16.4.3. Methodology for UX Design
16.4.4. Best Practices in the Prototyping Process

16.5. Extended Reality
16.5.1. Extended Reality Concepts
16.5.2. Technologies for Mobile Localization
16.5.3. AR and VR Application and Services

16.6. Internet of Things (IoT). (I)
16.6.1. IoT Fundamentals
16.6.2. IoT Devices and Communications

16.7. Internet of Things (IoT). (II)
16.7.1. Beyond Cloud Computing
16.7.2. (Smart Cities)
16.7.3. Digital Twin
16.7.4. IoT Projects

16.8. Blockchain
16.8.1. Blockchain Fundamentals
16.8.2. Blockchain-based Applications and Services

16.9. Autonomous Driving
16.9.1. Technologies for Autonomous Driving
16.9.2. V2X Communications

16.10. Innovative Technology and Research
16.10.1. Fundamentals of Quantum Computing
16.10.2. Applications of Quantum Computing
16.10.3. Introduction to Research

Module 17. Information Systems Security

17.1. A global Perspective on Security, Cryptography and Classical Cryptanalysis
17.1.1. Computer Security: Historical Perspective
17.1.2. But What Exactly is Meant by Security?
17.1.3. History of Cryptography
17.1.4. Substitution Ciphers
17.1.5. Case Study: The Enigma Machine

17.2. Symmetric Cryptography
17.2.1. Introduction and Basic Terminology
17.2.2. Symmetric Encryption
17.2.3. Operating Modes
17.2.4. DES
17.2.5. The New AES Standard
17.2.6. Encryption in Flow
17.2.7. Cryptanalysis

17.3. Asymmetric Cryptography
17.3.1. Origins of Public Key Cryptography
17.3.2. Basic Concepts and Operation
17.3.3. The RSA Algorithm
17.3.4. Digital Certificates
17.3.5. Key Storage and Management

17.4. Network Attacks
17.4.1. Network Threats and Attacks
17.4.2. Enumeration
17.4.3. Traffic Interception: Sniffers
17.4.4. Denial of Service Attacks
17.4.5. ARP Poisoning Attacks

17.5. Security Architectures
17.5.1. Traditional Security Architectures
17.5.2. Secure Socket Layer: SSL
17.5.3. SSH Protocol
17.5.4. Virtual Private Networks (VPNs)
17.5.5. External Storage Unit Protection Mechanisms
17.5.6. Hardware Protection Mechanisms

17.6. System Protection Techniques and Secure Code Development
17.6.1. Operational Safety
17.6.2. Resources and Controls
17.6.3. Monitoring
17.6.4. Intrusion Detection Systems
17.6.5. Host IDS
17.6.6. Network IDS
17.6.7. Signature-Based IDS
17.6.8. Lure Systems
17.6.9. Basic Security Principles in Code Development
17.6.10. Failure Management
17.6.11. Public Enemy Number 1: Buffer Overflows
17.6.12. Cryptographic Botches

17.7. Botnets and Spam
17.7.1. Origin of the Problem
17.7.2. Spam Process
17.7.3. Sending Spam
17.7.4. Refinement of Mailing Lists
17.7.5. Protection Techniques
17.7.6. Antispam Service Offered by Third Parties
17.7.7. Study Cases
17.7.8. Exotic Spam

17.8. Web Auditing and Attacks
17.8.1. Information Gathering
17.8.2. Attack Techniques
17.8.3. Tools

17.9. Malware and Malicious Code
17.9.1. What is Malware?
17.9.2. Types of Malware
17.9.3. Virus
17.9.4. Cryptovirus
17.9.5. Worms
17.9.6. Adware
17.9.7. Spyware
17.9.8. Hoaxes
17.9.9. Phishing
17.9.10. Trojans
17.9.11. The Economy of Malware
17.9.12. Possible Solutions

17.10. Forensic Analysis
17.10.1. Evidence Collection
17.10.2. Evidence Analysis
17.10.3. Anti-forensic Techniques
17.10.4. Case Study

Module 18. Integration Systems

18.1. Introduction to Information Systems in the Company
18.1.1. The Role of Information Systems
18.1.2. What is an Information System?
18.1.3. Dimensions of Information Systems
18.1.4. Business Processes and Information Systems
18.1.5. I department of SI/TI

18.2. Opportunities and Needs of Information Systems in the Company
18.2.1. Organizations and Information Systems
18.2.2. Features of Organisations
18.2.3. Impact of Information Systems in the Company
18.2.4. Information Systems to Achieve a Competitive Advantage
18.2.5. Use of Systems in the Administration and Management of the Company

18.3. Basic Concepts of Information Systems and Technologies
18.3.1. Data, Information and Knowledge
18.3.2. Technology and Information Systems
18.3.3. Technology Components
18.3.4. Classification and Types of Information Systems
18.3.5. Service and Business Process Based Architectures
18.3.6. Forms of Systems Integration

18.4. Systems for the Integrated Management of Company Resources
18.4.1. Business Needs
18.4.2. An Integrated Information System for the Company
18.4.3. Acquisition vs. Development
18.4.4. ERP Implementation
18.4.5. Implications for Management
18.4.6. Leading ERP Vendors

18.5. Supply Chain and Customer Relationship Management Information Systems
18.5.1. Definition of Supply Chain
18.5.2. Effective Supply Chain Management
18.5.3. The Role of Information Systems
18.5.4. Supply Chain Management Solutions
18.5.5. Customer Relationship Management
18.5.6. The Role of Information Systems
18.5.7. Implementation of a CRM System
18.5.8. Critical Success Factors in CRM Implementation
18.5.9. CRM, e-CRM and Other Trends

18.6. ICT Investment Decision-Making and Information Systems Planning
18.6.1. Criteria for ICT Investment Decisions
18.6.2. Linking the Project to the Management and Business Plan
18.6.3. Management Implications
18.6.4. Redesign of Business Processes
18.6.5. Management's Decision on Implementation Methodologies
18.6.6. Need for Information Systems Planning
18.6.7. Objectives, Participants and Moments
18.6.8. Structure and Development of the Systems Planning
18.6.9. Follow-up and Updating

18.7. Security Considerations in the Use of ICTs
18.7.1. Risk Analysis
18.7.2. Security in Information Systems
18.7.3. Practical Advice

18.8. Feasibility of ICT Project Implementation and Financial Aspects in Information Systems Projects
18.8.1. Description and Objectives
18.8.2. EVS Participants
18.8.3. Techniques and Procedures
18.8.4. Cost structure
18.8.5. Financial Projection
18.8.6. Budgets

18.9. Business Intelligence
18.9.1. What is Business Intelligence?
18.9.2. BI Implementation Strategy
18.9.3. Present and Future in BI

18.10. ISO/IEC 12207
18.10.1. What is "ISO/IEC 12207"?
18.10.2. Analysis of Information Systems
18.10.3. Information System Design
18.10.4. Implementation and Acceptance of the Information System

07

Methodology

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

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

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

TECH Business School uses the Case Study to contextualize all content

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

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

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

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

A learning method that is different and innovative

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

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

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

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

Relearning Methodology

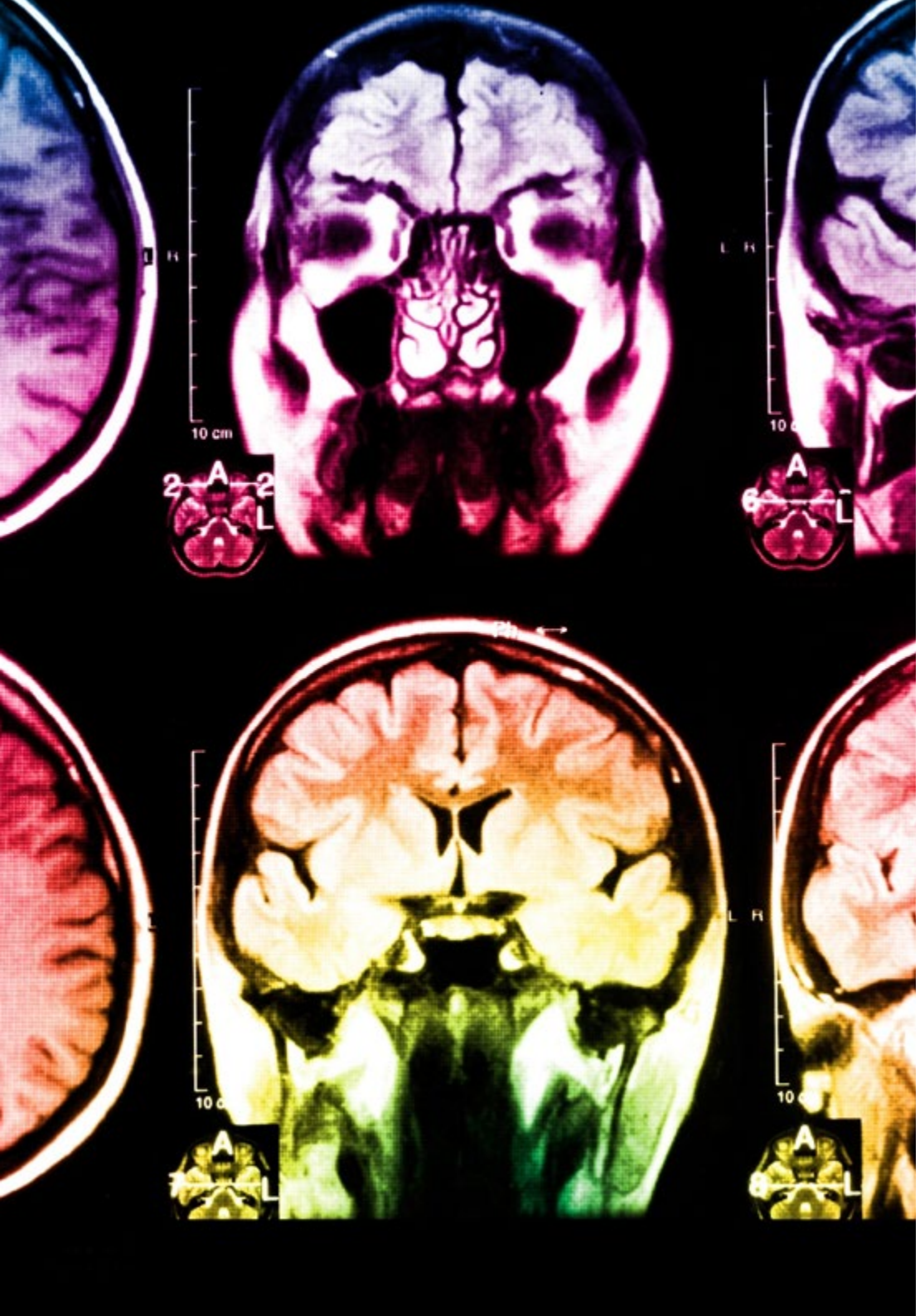
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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

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

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

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



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

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

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

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

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

Study Material

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

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

Classes

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

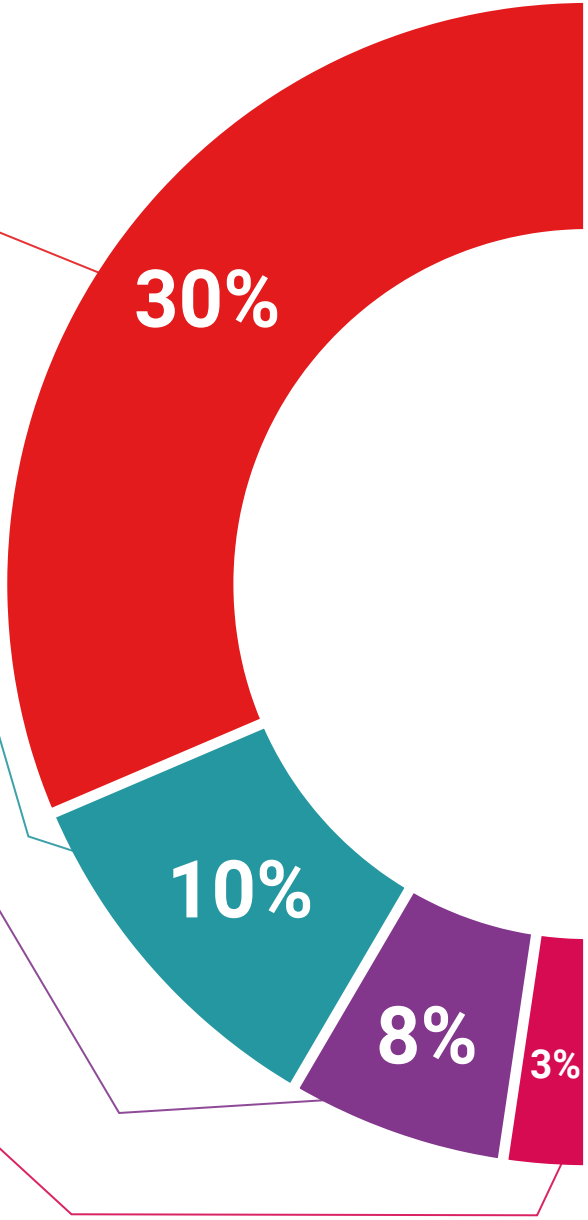
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

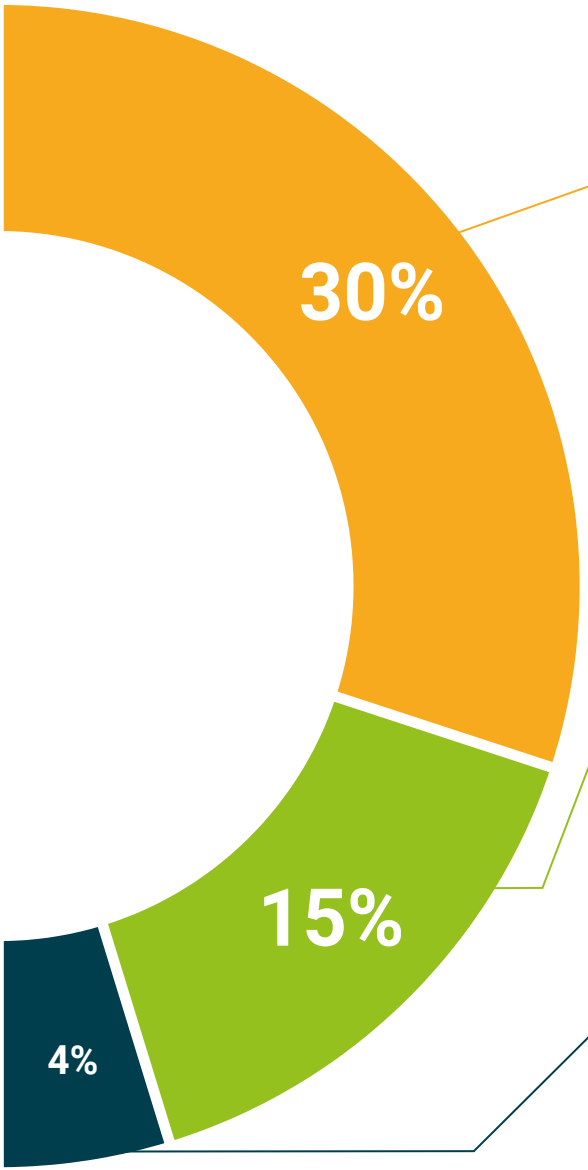
Management Skills Exercises

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

Additional Reading

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





Case Studies

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

Interactive Summaries

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

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

Testing & Retesting

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

08

Our Students' Profiles

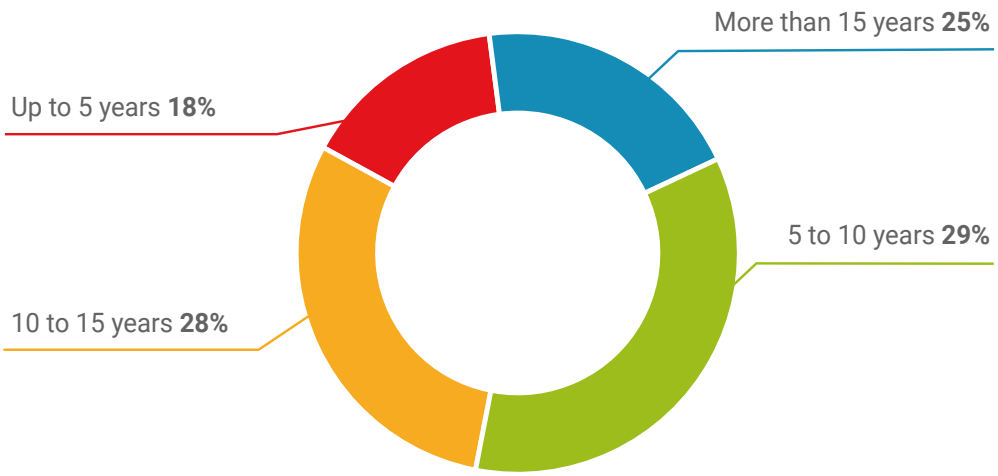
Students who decide to take this Advanced Master's Degree in TECH are business professionals with extensive experience, who have understood the importance of knowing the new technologies to apply to the company in depth and, therefore, seek ways to specialize in this area of knowledge to be able to manage the programs that have been introduced in their businesses, and to get the most out of them.

This program will help business professionals specialize in a novel field"

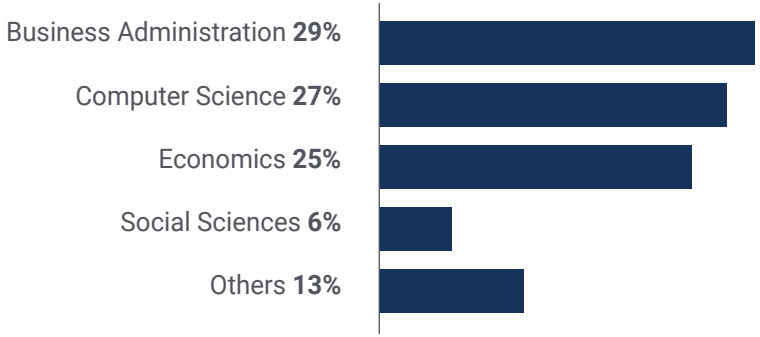
Average Age

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

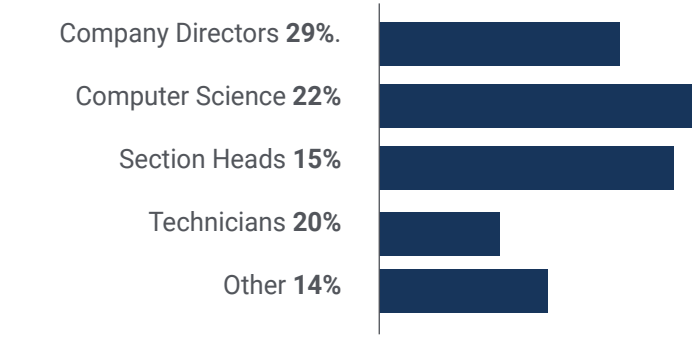
Years of Experience



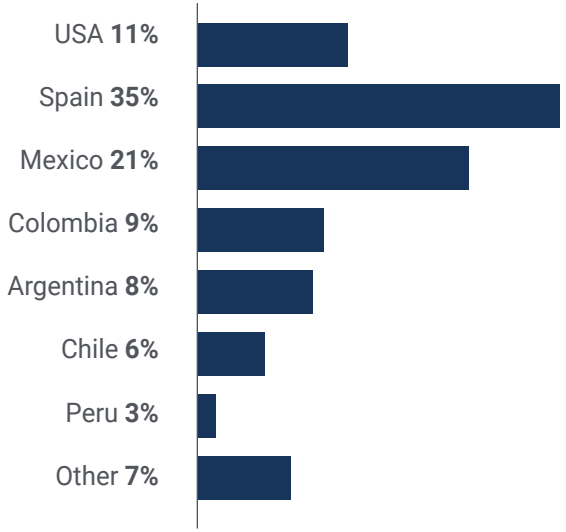
Training



Academic Profile



Geographical Distribution



Germán Díaz

CIO

"Completing this Advanced Master's Degree has opened the doors to an area of knowledge that is fundamental to my professional development. I am now better able to understand the use we must make of new technologies in the company, and I can manage this work with more confidence. Undoubtedly, the step I needed to give a boost to my career"

09

Impact on Your Career

This program is a unique opportunity to improve students' skills and thus improve their employability, giving a boost to their professional careers. It is a high-quality program, which includes the most complete and relevant data on Information Systems Management, as well as a first class teaching staff and the most innovative teaching methodology in the current academic panorama.

Obtaining a higher specialization in this field will allow you to improve your employability options in a short time"

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

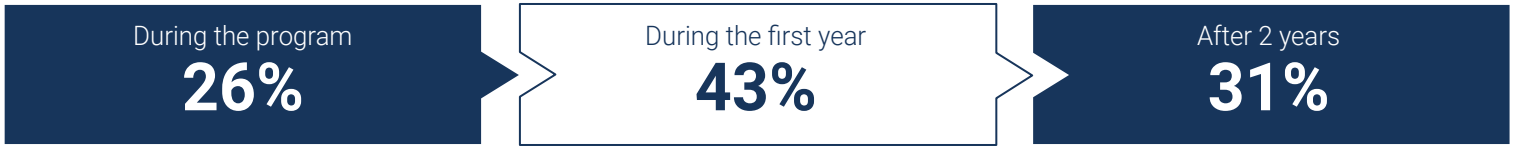
The Advanced Master's Degree in Information Systems Management (Chief Information Officer) at TECH Technological University is an intensive program that prepares students to face business challenges and decisions, both nationally and internationally. The main objective is to promote your personal and professional growth. Help you achieve success.

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

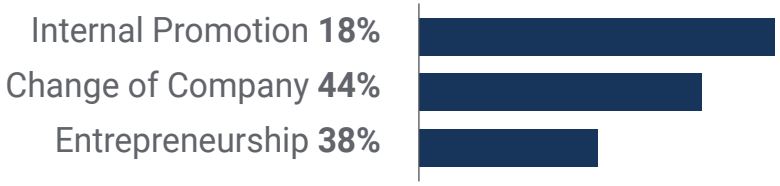
If you want your CV to stand out in the selection processes, do not hesitate and join TECH.

Get the job promotion you want by improving your Rapidly improve your career prospects.

When the change occurs



Type of change



Salary increase

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

10

Benefits for Your Company

This TECH program has been designed with the training needs of business professionals in Information Systems Management in mind, but also what students will be able to contribute to the companies in which they work. Therefore, it will not only be a competitive advantage for the student themselves, providing him with greater employability, but also for the companies, where he will be able to contribute all their value and knowledge.

Bring a new model of Information Systems Management, to your company which is more up to date and more competitive"

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

01

Intellectual Capital and Talent Growth

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

02

Retaining high-potential executives to avoid talent drain

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

03

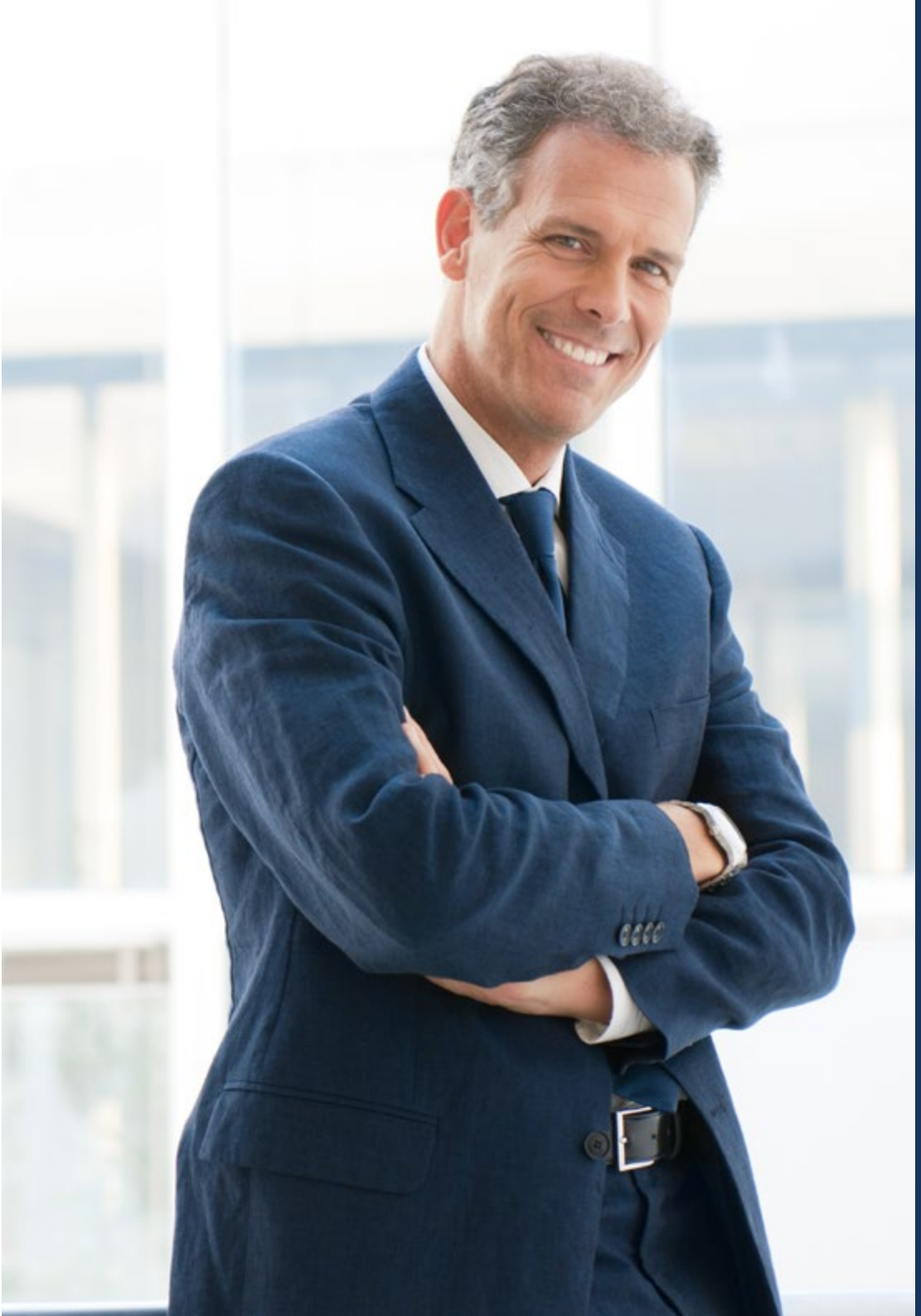
Building agents of change

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

04

Increased international expansion possibilities

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



05

Project Development

The manager will be able to work on a real project or develop new projects in the R&D or Business Development area of his or her company.

06

Increased competitiveness

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

11

Certificate

The Advanced Master's Degree in Information Systems Management (Chief Information Officer) guarantees, in addition to the most rigorous and update training, access to a Advanced Master's Degree issued by TECH Technological University.

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

This **Advanced Master's Degree in Information Systems Management (Chief Information Officer)** ccontains the most complete and updated program on the market.

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

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

Title: **Advanced Master's Degree in Information Systems Management (Chief Information Officer)**

Official N° of hours: **3,000 h.**


tech technological university

Awards the following

CERTIFICATE

to

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

For having successfully passed and accredited the following program

ADVANCED MASTER'S DEGREE

in

Information Systems Management (Chief Information Officer)

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

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

June 17, 2020

Tere Guevara Navarro
Dean

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


Advanced Master's Degree in Information Systems Management (Chief Information Officer)

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Leadership, Ethics, and CSR	166	CO
1º	Strategic Management and Executive Management	166	CO
1º	People and Talent Management	166	CO
1º	Economic and Financial Management	166	CO
1º	Operations and Logistics Management	166	CO
1º	Information Systems Management	166	CO
1º	Commercial Management, Marketing, and Corporate Communication	166	CO
1º	Innovation and Project Management	166	CO
1º	Physical Fundamentals of Computing	166	CO

Year	Subject	Hours	Type
2º	Computer Technology	166	CO
2º	The Structure of Computers	166	CO
2º	Operating Systems	166	CO
2º	Advanced Operating System	166	CO
2º	Free Software and Open Knowledge	166	CO
2º	Computer Networks	166	CO
2º	Emerging Technologies	166	CO
2º	Information Systems Security	166	CO
2º	Systems Integration	166	CO

Tere Guevara Navarro
Dean

tech technological university

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

tech technological university

Advanced Master's Degree
Information Systems Management (Chief Information Officer)

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

Advanced Master's Degree

Information Systems Management (Chief Information Officer)

tech technological university