Professional Master's Degree
Corporate Technical Data Science Management

tech technological university

Professional Master's Degree
Corporate Technical Data Science Management

- » Modality: **online**
- » Duration: **12 months**
- » Certificate: **TECH Technological University**
- » Dedication: **16h/week**
- » Schedule: **at your own pace**
- » Exams: **online**

Website: **www.techtitute.com/us/information-technology/professional-master-degree/master-corporate-technical-data-science-management**

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01
Introduction

This intensive specialization program is aimed at those interested in attaining a higher level of knowledge of Corporate Technical Data Science Management. Its teaching program is unique for its careful selection of technologies, including the most recently incorporated and in demand in the business world. In addition, the incorporation of specific modules for the improvement of business vision and the management of multidisciplinary teams, makes this program different and capable of covering a large part of the educational needs of any professional who wishes to position themselves as a reference in the theoretical and practical knowledge of the latest technologies.

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" *With the best developed distance learning systems, this Professional Master's Degree will allow you to learn in a contextual way, learning the practical skills that you need"*

In today's rapidly changing world, the proliferation of new technologies is a constant. Currently, we are accustomed to cutting-edge tools, platforms or technologies that are becoming obsolete with reduced applicability in the business environment.

Similarly, it is only natural that emerging or non-existent technologies in niche markets become trends in more general areas.

Without any doubt, this is an unstoppable and constantly evolving process, the maximum exponent of the current technological revolution, which forces IT professionals to specialise on a permanent basis.

In view of this situation, this Professional Master's Degree in Corporate Technical Data Science Management is offered as a comprehensive program that includes the most advanced and demanded technologies in the business environment.

Therefore, in an exercise of synthesis, from both a technical and business perspective, a set of subjects that are not usually covered by general training programs has been selected, with the aim of providing students with the necessary technological knowledge to address multiple current technological problems through the use of the most appropriate and advanced techniques.

As such, the combination of both purely technical and business subjects, make this Professional Master's Degree a cutting-edge specialization especially oriented to professionals who seek to learn the most currently widespread technologies, or a higher level of knowledge of these.

The main objective is to enable students to apply the knowledge acquired in this course to the real world, in a work environment that reproduces the conditions that may be encountered in the future, in a rigorous and realistic manner.

As it is a 100% online program, students will not have to give up personal or professional obligations. Upon completion of the program, students will have updated their knowledge and will be in possession of an incredibly prestigious degree that will allow them to advance both personally and professionally.

This **Professional Master's Degree in Corporate Technical Data Science Management** contains the most complete and up-to-date program on the market. The most important features include:

- The development of case studies is presented by experts in Corporate Technical Data Science Management
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- 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

An intensive professional growth program that will allow you to intervene in a sector with a growing demand for professionals"

In this Professional Master's Degree, you will be able to balance the efficiency of the most advanced learning methods with the flexibility of a program created to adapt to your possibilities of dedication, without losing quality"

A complete and cutting-edge program that will allow you to progressively and completely acquire the knowledge you need to work in this sector.

Comprehensive yet focused; this program will provide you with the specific knowledge Engineer IT professionals need to compete among the best in the sector.

The program's teaching staff includes professionals from sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

02
Objectives

The objective of this program is to prepare professionals in Corporate Technical Data Science Management, with the knowledge and skills required to perform their duties, using the current most advanced protocols and techniques. Through a work approach that is totally adaptable to the student, this Professional Master's Degree will progressively lead you to acquire the skills that will propel you to a higher professional level. A unique program designed by professionals with extensive experience in the field.

Delve into the field of computer technologies by incorporating the most advanced aspects of this field of work"

General Objectives

- Analyze ERP and CRM systems, their contribution and benefits
- Design and select the right ERP or CRM tool for each company
- Develop each stage of the data lifecycle
- Establish the regulatory framework related to data handling
- Examine the data mining process
- Analyze a web platform and optimising its operation
- Evaluate sessions and traffic to better understand the audience
- Analyze the regulatory framework for data protection and its relationship with the future regulation of artificial intelligence-based systems
- Develop specialised knowledge on maintainable, scalable and reliable systems
- Analyze different data models and their impact on applications
- Analyze classical system models and identify shortcomings for use in distributed applications
- Examine the distributed computing paradigm and establish the microservice model
- Generating IoT expertise
- Develop the IoT Reference Architecture and technology framework
- Analyze the concept of Agile Methodology for Project Management and develop the elements and processes of the SCRUM framework
- Examine and develop the elements of the KANBAN method for Project Management
- Base our company's differentiation on intangible resources
- Identify opportunities for improvement through mindfulness
- Present a business model based on flowing with change and uncertainty rather than "breaking" through resistance
- Dynamize the company by using emotion management as a way to success

Specific Objectives

Module 1. The Main Information Management Systems

- Developing a commercial strategy
- Generate specialised knowledge for commercial decision making
- Design a unified *reporting* system
- Determine how to establish communication and information exchange between the company's departments and customers
- Be able to transform information for decision making
- Develop a marketing plan for customer loyalty
- Design Marketing plan to increase sales

Module 2. Data Types and Data Life Cycle

- Generate specialized knowledge to perform data analysis
- Unify diverse data, Achieving consistency of information
- Produce relevant, effective information, for decision making
- Establish best practices for data management according to their typology and uses.
- Develop the data access and reuse policies
- Ensure security and information availability, integrity and confidentiality
- Use data management tools (with R)

Module 3. Number Machine Learning

- Evaluate the skills acquired in the process of moving from information to knowledge
- Develop the different types of machine learning
- Analyze the metrics and validation methods of different machine learning algorithms.
- Compile the different implementations of the various machine learning methods
- Determine the probabilistic reasoning models
- Examine the potential of deep learning
- Demonstrate knowledge of different machine learning algorithms

Module 4. Web Analytics

- Generate specialized knowledge in the use of Web Analytics
- Examine the evolution and development from its origin to the present day
- Establish an optimal configuration of Google Analytics, a fundamental work tool in online marketing
- Analyze web traffic to understand user behavior
- Develop basic and advanced metrics that will allow us to evaluate hits or interactions with websites
- Determine monitoring parameters: metrics and dimensions
- Configure the Google Analytics tool and the use of tracking tags on the website
- Differentiate between the two existing versions of Google Analytics: UA vs. GA4
- Identify the the organization and structure of Universal Analytics: accounts, properties and views
- Analyze user behavior by interpreting predefined and/or customized reports
- Assess traffic subsets of the total data we see in reports using segments
- Evaluate conversions by optimizing the marketing strategy and making decisions based on the results obtained

Module 5. Data Management Regulations

- Examine the data protection regulation and related regulations
- Analyze the different principles that govern Personal Data Processing
- Establish the bases that legitimize the processing of personal data
- Introducing the rights of individuals in the field of data protection, their exercise and attention
- Assess risks in order to adequately develop a risk treatment plan
- Identify likely practices to be prohibited or that may be assessed as high risk derived from technologies using artificial intelligence
- Develop the activities and phases in which the data protection impact assessment process is structured
- Specify measures to provide compliance solutions
- Examine the responsibilities of controllers and processors
- Identify non-compliance violations and associated penalties

Module 6. Scalable and Reliable Mass Data Usage Systems

- Establish the concepts of reliability, scalability and maintainability
- Evaluate relational, document and network models
- Analyze structured storage in the form of log, B-trees and other structures used in data engines
- Examine consistency models and their relationship to the concept of replication
- Understand the different replication models and associated issues
- Develop the fundamental principles of distributed transactions
- Examine database partitioning and keys to ensure that they are balanced

Module 7. System Administration for Distributed Deployments

- Develop requirements for distributed applications
- Make use of the most advanced tools for the exploitation of distributed applications
- Analyze the use of tools for infrastructure management
- Examine the most useful tools for the implementation of IaaS and PaaS models
- Develop the PaaS model and some of the tools currently used in its implementation
- Assessing monitoring tools oriented to distributed systems
- Propose verification and testing techniques for distributed platforms.
- Analyze the most used options in the implementation of Cloud platforms

Module 8. Internet of Things

- Determine what is IoT (Internet of Things) and IIoT (Industrial Internet of Things)
- Analyze the Industrial Internet Consortium
- Develop what is the IoT reference architecture
- Examine and classify IoT sensors and devices
- Establish the communications protocols and technologies used in IoT
- Analyze the different types of IoT platforms
- Develop the various data management mechanisms
- Establish security requirements for IoT data management
- Present the different IoT application areas

Module 9. Project Management and Agile Methodologies

- Present the PMI methodology for project management
- Establish the difference between project, program and project portfolio
- Evaluate the evolution of organizations working with projects
- Analyze which are the assets of the processes in the organizations
- Examine the matrix of process groups and knowledge areas and analyze its component processes
- Introduce the PMI family of project management credentials
- Evaluate the context of Agile methodologies for project management
- Developing the VUCA context (volatility, uncertainty, complexity and ambiguity)
- Identify Agile values
- Introduce the 12 principles of the Agile Manifesto
- Analyze the Agile SCRUM framework for project management.
- Develop Scrum pillars
- Identify and define Scrum values
- Establish roles in a Scrum team
- Present the Typified Ceremonies in Scrum
- Assess the artifacts used by Scrum Teams
- Analyze Scrum Team agreements
- Examine the metrics for measuring the performance of a Scrum Team
- Present the Agile KANBAN Framework for Project Management
- Analyze the elements that make up the Kanban method: values, principles and general practices
- Identify and define Kanban values
- Develop Kanban method principles
- Analyze the different general practices in the Kanban method.
- Examine metrics for performance measurement in Kanban
- Identify and analyze the differences between the three methodologies: PMI, Scrum y Kanban

Module 10. Communication, Leadership and Team Management

- Present the management skills necessary to ensure success in the technology company
- Proposing a leadership model adapted to changec
- Establish emotional intelligence as a basic management tool in the company
- Analyze improvement opportunities through mentoring, coaching and their difference
- Promote a heightened state of consciousness about communication
- Enhance the satisfaction of people in the company and reduce stress levels, improving workers' relationships with superiors or employees, with customers and even in the personal environment
- Develop negotiation and conflict resolution strategies in the technology company

A comprehensive program for IT professionals, which will allow them to compete among the best in the sector"

03
Skills

After passing the assessments of this Professional Master's Degree in Corporate Technical Data Science Management, students will have acquired the necessary professional skills to perform quality work and in the field of information technology and, in addition, will have acquired new skills that will help to complement the knowledge that they already had, putting them in a great, up-to-date position.
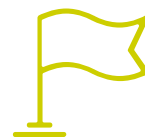
Through a program created to boost your professional growth, in the fastest and most intensive way, you will increase your capacity to intervene in all areas of Corporate Technical Data Science Management"

General Skill

- Respond to current needs in the area of Corporate Technical Data Science Management

Specific Skills

- Specialise in the most common information systems
- Use algorithms, tools and platforms to apply machine learning techniques
- Know the main regulations relating to the management and protection of corporate data
- Manage specific architectures for high-volume information processing for business exploitation
- Make use of the main IoT technologies and their applicability in real environments
- Carry out web analytics processes to better understand the potential client, as a key tool for the management of strategic actions
- Manage projects and people more effectively

A complete and cutting-edge program that will allow you to acquire the knowledge you need to work in this sector in a progressive and comprehensive manner"

04
Course Management

In keeping with its commitment to offering an elite education for all, TECH counts on renowned professionals so that the student acquires a solid knowledge in Corporate Technical Data Science Management. This Professional Master's Degree has a highly qualified and experienced team in the field, which will offer the best possible resources for students in developing their skills during the program. In this way, students have the guarantees they need to specialize at an international level in a booming sector that will catapult them to professional success.

"
Succeed with the very best professionals and acquire the knowledge and skills you need to embark in the field of Data Science Technical Management in the Enterprise"

Management

Dr. Peralta Martín-Palomino, Arturo

- CEO and CTO at Prometeus Global Solutions
- CTO at Korporate Technologies
- CTO in AI Shephers GmbH
- Director of Design and Development at DocPath Document Solutions
- Team Leader in DocPath Document Solutions
- Doctorate in Psychology from the University of CastillaLa
- PhD in Economics, Business and Finance from the Camilo José Cela University
- PhD in Psychology, University of CastillaLa Mancha
- Master's Degree in Advanced Information Technologies from the University of Castilla la Mancha
- Master MBA+E (Master's Degree in Business Administration and Organisational Engineering) from the University of Castilla la Mancha
- Associate lecturer, teaching undergraduate and master's degrees in Computer Engineering at the University of Castilla la Mancha
- Professor of the Master in Big Data and Data Science at the International University of Valencia
- Professor of the Master's in Industry 4.0 and of the Master's in Industrial Design and Development Member of the SMILe Research Group of the University of Castilla la Mancha

Professors

Mr. Montoro Montarroso, Andrés

- Researcher in the SMILe Group at the University of Castilla-La Mancha
- Data Scientist at Prometeus Global Solutions
- Graduate in Computer Engineering from the University of Castilla-La Mancha.
- Master's Degree in Data Science and Computer Engineering from the University of Granada
- Guest lecturer in the subject of Knowledge-Based Systems at the Escuela Superior de Informática de Ciudad Real, Giving the Lecture "Advanced Artificial Intelligence Techniques: Search and Analysis of Potential Social Media Radicals"
- Guest lecturer in the subject of Data Mining at the Escuela Superior de Informática de Ciudad Real giving the lecture: "Applications of Natural Language Processing: Fuzzy Logic to the analysis of messages in social networks"
- Speaker at the Seminar on Corruption Prevention in Public Administrations and Artificial Intelligence. Faculty of Law and Social Sciences of Toledo. Conference entitled "Artificial Intelligence Techniques". Speaker at the first International Seminar on Administrative Law and Artificial Intelligence (DAIA). Organised by Centro de Estudios Europeos Luis Ortega Álvarez and Institut de Recerca TransJus. Conference entitled "Sentiment Analysis for the prevention of hate speech on social media"

Ms. Palomino Dávila, Cristina

- Consultant and Senior GRC Auditor. Compliance with legislation Data Protection, National Security Scheme and information security regulatory frameworks. Oesía Networks, S.L
- Consultant and Senior Auditor in Personal Data Protection and information society services Compliance with legislation. Criminal Compliance Helas Consultores, S.L
- Preparation of contents and delivery of numerous training and awareness-raising seminars on data protection and information security, in the area of company-client relations
- Internal audits Audit Sub-Directorate - General Secretariat. Internal data protection audit of CLH Group companies located in Spain and the United Kingdom.. Compañía Logística de Hidrocarburos CLH, S.A
- Graduate in Law from the University of Castilla – La Mancha
- Master's Degree in Legal Consultancy for Businesses from the Instituto de Empresa
- Advanced Course in Digital Security and Crisis Management by the University of Alcalá and the Spanish Security and Crisis Alliance– AESYC
- Senior Graduate Corporate Legal Relations Area Madrid. Support to the Data Protection Delegate of the company and participated companies Canal de Isabel II, S.A

Mr. Peris Morillo, Luis Javier

- Technical Lead in Capitole Consulting. He leads a team at Inditex in the logistics unit of its open platform
- Senior Technical Lead y Delivery Lead Support en HCL
- Agile Coach and Director of Operations at Mirai Advisory
- Member of the Steering Committee as Chief Operating Officer
- Developer, Team Lead, Scrum Master, Agile Coach, Product Manager in DocPath
- Higher Engineering in Computer Science by the ESI of Ciudad Real (UCLM)
- Postgraduate in Project Management by CEOE - Confederación Española de Organizaciones Empresariales (Spanish Confederation of Business Organisations)
- 50+ MOOCs taken, taught by renowned universities such as Stanford University, Michigan University, Yonsei University, Polytechnic , University of Madrid, etc.
- Several certifications, some of the most notable or recent ones are Azure Fundamentals

Ms. García La O, Marta

- Management, administration and account management at Think Planning and Development S.L
- Organisation, supervision and mentoring of High management training courses in Think Planning and Development S.L
- Mentoring of new employees and optimization of human capital potentials for Think Planificación y Desarrollo S.L
- Accountant-administrative in Tabacos Santiago y Zaraiche-Stan Roller, SL.
- Marketing Specialist at Versas Consultores
- Accountant-Administrative at Group T-6, SL.
- Master's Degree in Commercial and Marketing Management. CTO Business School
- Diploma in Business Administration. University of Murcia (Spain)

Mr. García Niño, Pedro

- Sales Manager of computer services in the companies Camuñase, S.L. and Electrocamuñas, S.L.
- Specialist in Digital Marketing and RRSS
- SEO On-Page / Internal Factors Specialist
- Off-Page SEO/Linkbuilding/Black Hat SEO Specialist
- SEM/PPC/Google Ads Specialist
- Specialist in digital marketing analytics and performance measurement / Google Analytics
- Specialist in organic positioning and SEO UNED Foundation
- Specialist in PPC and SEM Aula CM
- Official Certification on Google Ads Search Campaigns
- Official Certification on Google Ads Display
- Computer Engineering
- Technical training in assembly and installation of desktop computers
- Technical training in software installation and maintenance/cybersecurity
- Hardware/software technician in the companies Camuñase, S.L. and Electrocamuñas S.L.
- Web design, analytics and programming

Mr. Tato Sánchez, Rafel
- Project Management INDRA SISTEMAS S.A.
- Technical Director INDRA SISTEMAS S.A.
- Systems Engineer ENA TRÁFICO S.A.U.
- IFCD048PO. Software Project Management and Development Methodology with SCRUM
- Coursera: Machine Learning
- Udemy: Deep Learning A-Z. Hands-on Artificial Neural Networks
- Coursera: IBM: Fundamentals of Scalable Data Science
- Coursera: IBM: Applied AI with Deep Learning
- Coursera: IBM: Advance Machine Learning and Signal Processing
- Degree in Industrial Electronics and Automation Engineering from the European University of Madrid
- Master's Degree in Industrial Engineering from the European University of Madrid.
- Master's Degree in Industry 4.0 by the International University of La Rioja (UNIR)
- Professional certification. SSCE0110. Teaching for vocational training for employment

Mr. Díaz Díaz-Chirón, Tobías
- Researcher at the ArCO laboratory of the University of Castilla-La Mancha, a group dedicated to projects related to computer architectures and networks.
- Consultant at Blue Telecom, a company dedicated to the telecommunications sector
- Freelance mainly dedicated to the telecommunications sector, specialising in 4G/5G networks
- OpenStack: deploy and administration
- Degree in Computer Engineering from the University of Castilla-La Mancha, specialising in computer architecture and networks
- Associate Professor at the University of Castilla-La Mancha in the subjects of distributed systems, computer networks and concurrent programming
- Speaker at Sepecam course on network administration

Ms. Martínez Cerrato, Yésica
- Business Intelligence Analyst at Ricopia Technologies (Alcalá de Henares) Degree in Electronic Communications Engineering at the Polytechnic School, University of Alcalá
- Responsible for training new recruits on commercial management software (CRM, ERP, INTRANET.), product and procedures in Ricopia Technologies (Alcalá de Henares)
- Responsible for training new scholarship holders incorporated to the Computer Classrooms at the University of Alcalá
- Project Manager in the area of Key Accounts Integration at Correos and Telégrafos (Madrid)
- Computer Technician-Responsible for computer classrooms OTEC, University of Alcalá (Alcalá de Henares)
- Computer classes teacher at ASALUMA Association (Alcalá de Henares).
- Scholarship for Training as a Computer Technician in OTEC, University of Alcala (Alcalá de Henares)

Ms. Fernández Meléndez, Galina
- Data Analyst. Aresi | Gestión de Fincas - Madrid-Spain
- Data Analyst. ADN Mobile Solution-Gijón-Spain
- ETL processes, data mining, data analysis and visualisation, establishment of KPI's, Dashboard design and implementation, management control. ADN Mobile Solution-Gijón-Spain R development, SQL management, among others. Pattern determination, predictive modelling, machine learning
- Bachelor's degree in Business Administration. Bicentennial University of Aragua- Caracas-Diploma in Planning and Public Finance. Venezuelan School of Planning, School of Finance
- Professional Master's Degree in Data Analysis and Business Intelligence. University of Oviedo
- MBA in Business Administration and Management (Escuela De Negocios Europea De Barcelona)
- Master in Big Data and Business Intelligence (Escuela de Negocios Europea de Barcelona)

Structure and Content

The syllabus has been designed based on educational efficiency, carefully selecting the contents to offer a comprehensive course, which includes all the fields of study that are essential to achieve real knowledge of the subject. Including the latest updates and aspects of the field. Therefore, the syllabus consists of modules that offer a broad perspective of Corporate Technical Data Science Management

From first module, students will see their knowledge expanding, which will enable them to develop professionally, knowing that they can count on the support of a team of experts.

"

All the subjects and areas of knowledge have been compiled in a complete and up-to-date syllabus, in order to bring the student to the highest theoretical and practical level"

Module 1. The Main Information Management Systems

1.1.   ERP and CRM
 1.1.1.   ERP
 1.1.2.   CRM
 1.1.3.   Differences between ERP and CRM Point of Sale
 1.1.4.   Business Success
1.2.   ERP
 1.2.1.   ERP
 1.2.2.   Types of ERP
 1.2.3.   Development of an ERP Implementation Project.
 1.2.4.   ERP Resource Optimizer
 1.2.5.   Architecture of an ERP System
1.3.   Information Provided by the ERP
 1.3.1.   Information Provided by the ERP
 1.3.2.   Advantages and Disadvantages
 1.3.3.   The Information
1.4.   ERP Systems
 1.4.1.   Current ERP Systems and Tools
 1.4.2.   Decision-Making
 1.4.3.   Day-to-Day with ERP
1.5.   CRM: The Implementation Project
 1.5.1.   The CRM The Implementation Project
 1.5.2.   The CRM as a Commercial Tool
 1.5.3.   Strategies for the Information System
1.6.   CRM: Customer Loyalty
 1.6.1.   Starting Point
 1.6.2.   Sales or Loyalty
 1.6.3.   Factors for Success in our Loyalty System
 1.6.4.   Multi-Channel Strategies
 1.6.5.   Design of Loyalty Actions
 1.6.6.   E-Loyalty

1.7.   CRM: Communication Campaigns
 1.7.1.   Communication Actions and Plans
 1.7.2.   Importance of the Informed Customer
 1.7.3.   Listening to the Client
1.8.   CRM: Dissatisfaction Prevention
 1.8.1.   Customer Cancellations
 1.8.2.   Detecting Errors in Time
 1.8.3.   Improvement Processes
 1.8.4.   Recovery of the Dissatisfied Customer
1.9.   CRM: Special Communication Actions
 1.9.1.   Objectives and Planning of a Company Event
 1.9.2.   Design and Realization of the Event
 1.9.3.   Actions from the Department
 1.9.4.   Analysis of Results
1.10.   Relational Marketing
 1.10.1.   Implantation: Errors
 1.10.2.   Methodology, Segmentation and Processes
 1.10.3.   Performance, According to the Department
 1.10.4.   CRM Tools

Module 2. Data Types and Data Life Cycle

2.1.   Statistics
 2.1.1.   Statistics: Descriptive Statistics, Statistical Inferences
 2.1.2.   Population, Sample, Individual
 2.1.3.   Variables: Definition, Measurement Scales
2.2.   Types of Data Statistics
 2.2.1.   According to Type
  2.2.1.1. Quantitative: Continuous Data and Discrete Data
  2.2.1.2. Qualitative: Binomial Data, Nominal Data and Ordinal Data
 2.2.2.   According to their Shape
  2.2.2.1. Numeric
  2.2.2.2. Text
  2.2.2.3. Logical

3.7.	Multiclassifiers

    3.7.1.	"Bootstrap Aggregation" or "Bagging"

    3.7.2.	"Random Forests" Algorithm.

    3.7.3.	"Boosting" Algorithm

3.8.	Probabilistic Reasoning Models

    3.8.1.	Probabilistic Reasoning

    3.8.2.	Bayesian Networks or Belief Networks

    3.8.3.	"Hidden Markov Models"

3.9.	Multilayer Perceptron.

    3.9.1.	Neural Networks

    3.9.2.	Machine Learning with Neural Networks

    3.9.3.	Gradient Descent, Backpropagation and Activation Functions.

    3.9.4.	Implementation of an Artificial Neural Network

3.10 Deep Learning

    3.10.1.	Deep Neural Networks: Introduction

    3.10.2.	Convolutional Networks

    3.10.3.	Sequence Modelling

    3.10.4.	Tensorflow and Pytorch

Module 4. Web Analytics

4.1.	Web Analytics

    4.1.1.	Introduction

    4.1.2.	Evolution of Web Analytics

    4.1.3.	Process of Analysis

4.2.	Google Analytics

    4.2.1.	Google Analytics

    4.2.2.	Use

    4.2.3.	Objectives

4.3.	Hits. Interactions with the Website

    4.3.1.	Basic Metrics

    4.3.2.	KPI (Key Performance Indicators)

    4.3.3.	Adequate Conversion Rates

4.4.	Frequent Dimensions

    4.4.1.	Source

    4.4.2.	Medium

    4.4.3.	Keyword

    4.4.4.	Campaign

    4.4.5.	Personalized Labelling

4.5.	Google Analytics Configuration

    4.5.1.	Installation: Creating an Account

    4.5.2.	Versions of the Tool: UA/GA4

    4.5.3.	Tracking Label

    4.5.4.	Conversion Objectives

4.6.	Google Analytics Organization

    4.6.1.	Account

    4.6.2.	Property

    4.6.3.	View

4.7.	Google Analytics Reports

    4.7.1.	In Real Time

    4.7.2.	Audience

    4.7.3.	Acquisition

    4.7.4.	Behaviour

    4.7.5.	Conversions

    4.7.6.	E-Commerce

4.8.	Google Analytics Advanced Reports

    4.8.1.	Personalized Reports

    4.8.2.	Panels

    4.8.3.	APIs

4.9.	Filters and Segments

    4.9.1.	Filter

    4.9.2.	Segment

    4.9.3.	Types of Segments: Predefined/Customized

    4.9.4.	Remarketing Lists

Module 5. Data Management Regulations

Module 6. Scalable and Reliable Mass Data Usage Systems

6.1.   Scalability, Reliability and Maintainability

    6.1.1.   Scales

    6.1.2.   Reliability

    6.1.3.   Maintainability

6.2.   Data Models

    6.2.1.   Evolution of Data Models

    6.2.2.   Comparison of Relational Model with Document-Based NoSQL Model

    6.2.3.   Network Model

6.3.   Data Storage and Retrieval Engines

    6.3.1.   Structured Log Storage

    6.3.2.   Storage in Segment Tables

    6.3.3.   Trees B

6.4.   Services, Message Passing and Data Encoding Formats

    6.4.1.   Data Flow in REST Services

    6.4.2.   Data Flow in Message Passing

    6.4.3.   Message Sending Formats

6.5.   Replication

    6.5.1.   CAP Theorem

    6.5.2.   Consistency Models

    6.5.3.   Models of Replication Based on Leader and Follower Concepts

6.6.   Distributed Transactions

    6.6.1.   Atomic Operations

    6.6.2.   Distributed Transactions from Different Approaches Calvin, Spanner

    6.6.3.   Serialisability

6.7.   Partitions

    6.7.1.   Types of Partitions

    6.7.2.   Indexes in Partitions

    6.7.3.   Partition Rebalancing

6.8.   Batch Processing

    6.8.1.   Batch Processing

    6.8.2.   MapReduce

    6.8.3.   Post-MapReduce Approaches

Module 7. System Administration for Distributed Deployments

8.10.   Integration of IIoT in the Industry 4.0 Model
    8.10.1.   IoRT (Internet of Robotics Things)
    8.10.2.   3D Additive Manufacturing
    8.10.3.   Big Data Analytics

Module 9. Project Management and Agile Methodologies

9.1.   Project Management
    9.1.1.   The Project
    9.1.2.   Phases of a Project
    9.1.3.   Project Management
9.2.   PMI Methodology for Project Management
    9.2.1.   PMI (Project Management Institute)
    9.2.2.   PMBOK
    9.2.3.   Difference between Project, Program and Project Portfolio
    9.2.4.   Evolution of Organizations Working with Projects
    9.2.5.   Process Assets in Organizations
9.3.   PMI Methodology for Project Management: Process
    9.3.1.   Groups of Processes
    9.3.2.   Knowledge Areas
    9.3.3.   Process Matrix
9.4.   Agile Methodologies for Project Management
    9.4.1.   VUCA Context (Volatility, Uncertainty, Complexity and Ambiguity)
    9.4.2.   Agile Values
    9.4.3.   Principles of the Agile Manifesto
9.5.   Agile SCRUM Framework for Project Management
    9.5.1.   Scrum
    9.5.2.   The Pillars of the Scrum Methodology
    9.5.3.   The Values in Scrum
9.6.   Agile SCRUM Framework for Project Management. Process
    9.6.1.   The Scrum Process
    9.6.2.   Typified Roles in a Scrum Process
    9.6.3.   The Ceremonies of Scrum

9.7.   Agile SCRUM Framework for Project Management. Artefacts
    9.7.1.   Artefacts in the Scrum Process
    9.7.2.   The Scrum Team
    9.7.3.   Metrics for Evaluating the Performance of a Scrum Team
9.8.   Agile KANBAN Framework for Project Management. Kanban Method
    9.8.1.   Kanban
    9.8.2.   Benefits of Kanban
    9.8.3.   Kanban Method Components
9.9.   Agile KANBAN Framework for Project Management. Kanban Method Practices
    9.9.1.   The Values of Kanban
    9.9.2.   Principles of the Kanban Method
    9.9.3.   General Practices of the Kanban Method
    9.9.4.   Metrics for Kanban Performance Evaluation
9.10.   Comparison: PMI, SCRUM and KANBAN
    9.10.1.   PMI – SCRUM
    9.10.2.   PMI – KANBAN
    9.10.3.   SCRUM – KANBAN

Module 10. Communication, Leadership and Team Management

10.1.   Corporate Organizational Development
    10.1.1.   Corporate Climate, Culture and Organizational Development
    10.1.2.   Human Capital Management
10.2.   Management Models: Decision-Making
    10.2.1.   Paradigm Shift in Management Models
    10.2.2.   Management Process of a Technology Company
    10.2.3.   Decision-Making: Planning Instruments
10.3.   Leadership. Delegation and Empowerment
    10.3.1.   Leadership
    10.3.2.   Delegation and Empowerment
    10.3.3.   Performance Evaluation

A unique specialization program that stands out due to the quality of its contents and its excellent teaching staff"

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 has been the most widely used learning system among the world's leading Information Technology 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 that you are presented with in the case method, an action-oriented learning method. Throughout the course, students 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 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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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 adapted in 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 competencies and skills in each thematic 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.

30%

10%

8%

20%

25%

4%

3%
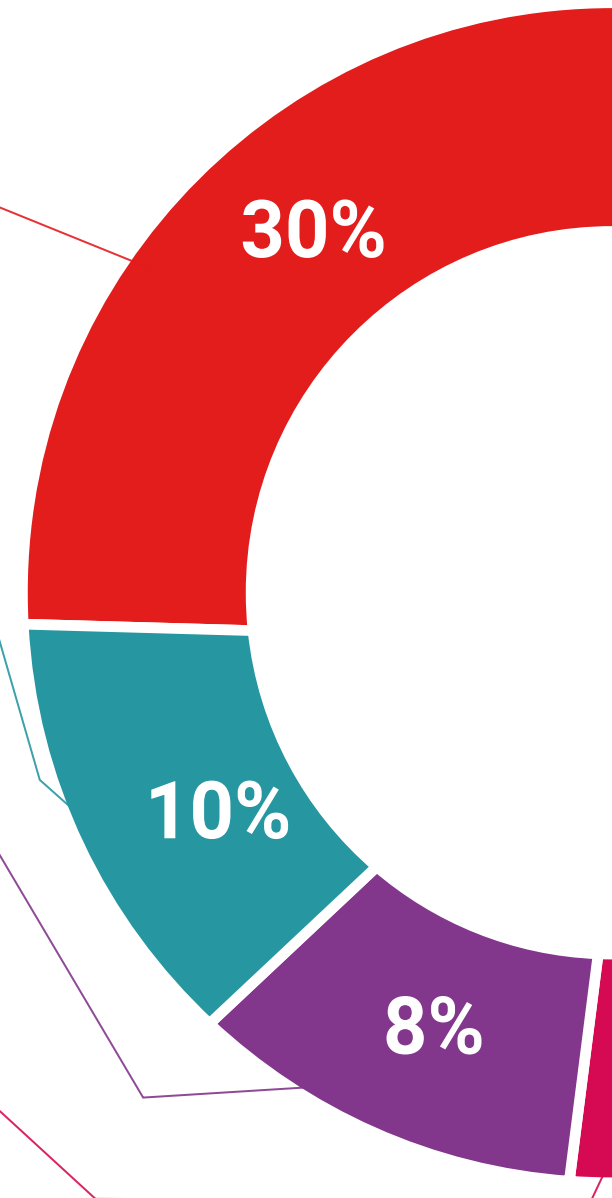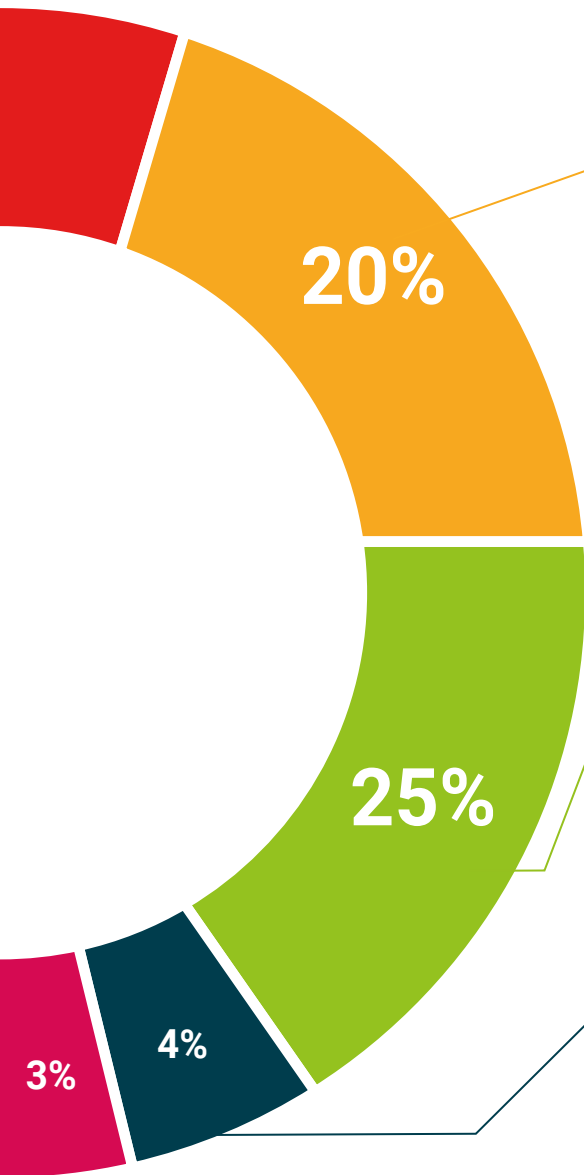
Case Studies

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.

07

Certificate

This Professional Master's Degree in Corporate Technical Data Science Management guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree issued by TECH Technological University.

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

This **Professional Master's Degree in Corporate Technical Data Science Management** contains the most complete and up-to-date programme on the market.

After passing the assessments, the student will receive their corresponding **Professional Master's Degree** diploma issued by **TECH Technological University** via tracked delivery*.
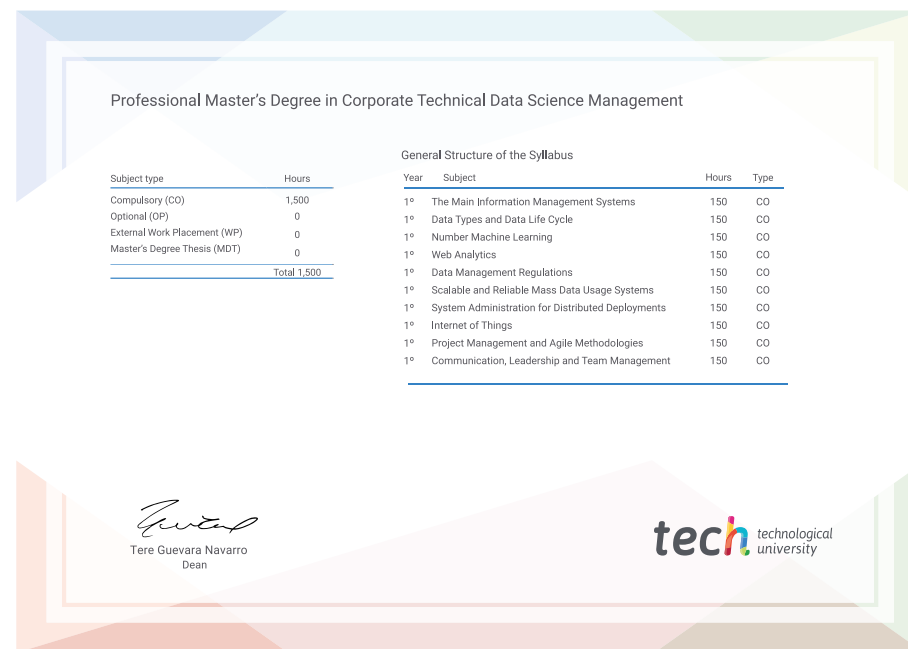
The diploma issued by **TECH Technological University** will express the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Professional Master's Degree in Corporate Technical Data Science Management**

Official Nº of Hours: **1,500 h.**

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tech technological university

Awards the following
DIPLOMA
to

Mr./Ms. _____ with identification number _____.
For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE
in

Corporate Technical Data Science Management

This is a qualification awarded by this University, equivalent to 1,500 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

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Professional Master's Degree in Corporate Technical Data Science Management

Subject type	Hours
Compulsory (CO)	1,500
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
Total	1,500

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	The Main Information Management Systems	150	CO
1º	Data Types and Data Life Cycle	150	CO
1º	Number Machine Learning	150	CO
1º	Web Analytics	150	CO
1º	Data Management Regulations	150	CO
1º	Scalable and Reliable Mass Data Usage Systems	150	CO
1º	System Administration for Distributed Deployments	150	CO
1º	Internet of Things	150	CO
1º	Project Management and Agile Methodologies	150	CO
1º	Communication, Leadership and Team Management	150	CO

Tere Guevara Navarro
Dean

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

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Professional Master's Degree
Corporate Technical Data Science Management

» Modality: **online**
» Duration: **12 months**
» Certificate: **TECH Technological University**
» Dedication: **16h/week**
» Schedule: **at your own pace**
» Exams: **online**

Professional Master's Degree
Corporate Technical Data Science Management

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