

An abstract geometric design in the top left corner of the page. It features a light gray grid of triangles of various sizes. An orange line starts from the left edge, moves right, then up, then right again, ending with a dot. Another orange line starts from the left edge, moves right, then up, then right again, ending with a dot. A third orange line starts from the left edge, moves right, then up, then right again, ending with a dot. The orange lines and dots are positioned on the grid lines.

PROFESSIONAL ACADEMY COURSE CATALOGUE







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PROFESSIONAL ACADEMY

Modis provides specialised technical training for different Engineering, IT and Life Science sectors, some of which are associated to important international certifications (IREB®, Scrum.org®, ISTQB®, IQBBA®).

The Professional Academies available are:

Academy Title		Certifier	Certification level
Agile	Scrum Developer	 Scrum.org	PSD
	Scrum Product Owner	 Scrum.org	PSP01
	Scrum Master I	 Scrum.org	PSMI
Requirements Engineering			CPRE Foundation Level
Testing			CTFL
Business Analysis			CFLBA

COURSE DELIVERY METHODS

The courses are delivered in three ways:

1. Courses organised upon the CUSTOMER'S request at Modis Consulting offices.

Courses in the catalogue can be delivered from Modis Consulting offices based on an agreed schedule between Modis Consulting and the customer.

To carry out training courses, at least four participants must be registered. The maximum number of participants recommended for class is 20.

The cost of courses is shown in the cost tables for each course.

2. Courses scheduled at Modis Consulting offices.

The courses in the catalogue are delivered at Modis Consulting offices based on a schedule defined at the beginning of the year.

For organisational needs, Modis Consulting can change the course date and place up to five working days before the course date.

Modis Consulting reserves the right to cancel the course if the minimum number of participants is not reached.

The cost of courses is shown in the cost tables for each course.

3. Courses organised upon the CUSTOMER's request at the CUSTOMER's premises.

The courses in the catalogue can be delivered at the customer's premises based on a schedule agreed between Modis Consulting and the customer.

To carry out training courses, at least four participants must be registered. The maximum number of participants recommended for class is 20.

The cost of courses is the same for mode 2 (tables of costs for each course shown in the paragraphs below) plus travel costs which will be calculated at the bottom of the list.

4. Courses delivered remotely

AGILE - SCRUM DEVELOPER

This two-day course will allow you to fully understand the Agile and Scrum Principles so that you can take advantage of a “bottom up” approach which minimises time to market through a development and delivery process that evolves towards automation.

The course is focused on the Developer as a Scrum Team member. It introduces participants to Extreme Programming software development practices. It prepares for Scrum.org "Professional Scrum Developer" certification and ends with an exam simulation.

Course content:

The course is highly interactive and is based on a set of activities, games, discussions, and real-life examples.

Starting from the Agile Manifesto, you will understand the Scrum team Roles and responsibilities and how the different players interact. Scrum is then explored from a Developer's point of view, to understand team member responsibilities in the various ceremonies and in the creation of artifacts.

We then explore best practices used in Extreme Programming to maximise team productivity and improve delivery process efficiency.

Below is a non-exhaustive list of topics covered in the course:

- The agile manifesto: Agile principles and mindset; The Scrum process and Sprint concept; Five Scrum values.
- Introduction to Scrum roles: Scrum Master; Product Owner; The Team.
- Sprint planning: Daily Scrum; Sprint review; Sprint retrospective.
- Product Backlog: Product Increment and the definition of "Done"; Product Backlog and Sprint Backlog.
- XP practices: Test driven development; Acceptance test driven development; Continuous integration
- Continuous deployment; Code quality metrics; Technical debt management; Refactoring, Pair programming.

Course duration and delivery methods:

2 days - Mode 1 - Mode 2 - Mode 3

Course price:

No. of participants	List Price (per person, excluding VAT)
1	€ 720
2	€ 690
3	€ 650
From 4 and above	€ 630

AGILE - SCRUM MASTER

This two-day course will allow you to fully understand the Agile and Scrum Principles. You will apply Scrum in your company effectively and quickly. During the course you will learn how to use Scrum to achieve goals such as improving time to market and productivity, the ability to implement changes in software and delivery with priorities dictated solely by business value.

You will learn the Scrum strengths compared to the traditional Project Management methodology, how to adapt Scrum to your business reality and avoid falling into its main application errors.

This course prepares you for the first Scrum.org "Professional Scrum Master" certification and ends with an exam simulation.

Course content:

The course is highly interactive and is based on a set of activities, games, discussions, and real-life examples.

Starting from the Agile Manifesto, you will understand the Scrum team Roles and responsibilities and how the different players interact. You will learn the Practices and how they produce Scrum Artifacts.

We will discuss the main differences between the traditional Project management and Agile methodologies, highlighting how the latter will allow the Team's autonomous evolution, so that it can cope with change, "embrace" and exploit it to improve the process. You will understand that Scrum is an adaptable process focused on people and interactions rather than the adoption of practices and a predefined process.

Below is a non-exhaustive list of topics covered in the course:

- The agile manifesto: Agile principles and mindset; The Scrum process and Sprint concept; The meaning of "Done"; The five values; Scrum Applicability.
- Introduction to Scrum roles: Scrum Master; Product Owner; The Team; How to facilitate and coach.
- Sprint planning: Daily Scrum; Sprint review; Sprint retrospective; Release planning.
- Product Backlog: Product Increment; Requirements Management and Product Backlog; Sprint Backlog; Performance Metrics.

Course duration and delivery methods:

2 days - Mode 1 - Mode 2 - Mode 3

Course price:

No. of participants	List Price (per person, excluding VAT)
1	€ 820
2	€ 800
3	€ 780
From 4 and above	€ 750

AGILE - SCRUM PRODUCT OWNER

After an introduction to the Agile and Scrum Principles, this two-day course will focus on the knowledge, skills and tools that a Product Owner should develop to excel in their work and obtain maximum benefit from the Scrum application.

This course prepares for the first Scrum.org "Professional Scrum Product Owner" certification and ends with an exam simulation.

Course content:

The course is highly interactive and is based on a set of activities, games, discussions, and real-life examples.

Starting from the Agile Manifesto, you will understand the Scrum team Roles and responsibilities and how the different players interact.

We will explore the techniques and tools that a Product Owner should master to achieve better planning, satisfy stakeholders, maximise Return Of Investment and get the best from their team.

Below is a non-exhaustive list of topics covered in the course:

- The agile manifesto: The Agile Manifesto; The Scrum roles.
- Product Backlog: Product Backlog Items; User roles; User stories; Story mapping
- Scrum Team roles: Scrum Master; Product Owner; The Product Owner role in the Scrum process; Product Owner in Scaled Scrum.
- Sprint: Potentially shippable product increment; Rules during a Sprint.
- Estimates: Story points; Planning Poker.
- Setting priorities: Introduction to different techniques.
- Planning: Velocity; Fixed scope planning; Fixed date planning.

Course duration and delivery methods:

2 days - Mode 1 - Mode 2 - Mode 3

Course price:

No. of participants	List Price (per person, excluding VAT)
1	€ 820
2	€ 800
3	€ 780
From 4 and above	€ 750

REQUIREMENTS ENGINEERING

This 20-hour course teaches the fundamental concepts of requirements engineering, an interdisciplinary process used to elicit, analyse, develop, define verification and validation criteria, manage requirements communication and documentation.

Course content:

The course is aligned to the ISO/IEC/IEEE 29148 (Systems and software engineering - Life cycle processes - Requirements engineering) international standard and the CPRE Foundation Level - IREB® Syllabus presenting a series of contents aimed at passing the IREB® CPRE Foundation Level certification exam.

Below is a non-exhaustive list of topics covered in the course:

- Introduction: Requirements Engineering, Stakeholders, Requirements Definition, Use of Natural Language, Use of Templates, Features of a Set of Requirements; Requirements Characteristics, Attributes and Types.
- Requirements Engineering Process: Process Iteration and Recursion, Requirements Multi-Level Purpose, Requirements Multi-Level Documentation, Stakeholders Requirements Specification, System Requirements Specification, Software Requirements Specification, Requirements Engineering Process Overview.
- Requirements Capture and Identification: Stakeholder Requirements Definition Process, Requirements Analysis Process.
- Requirements Specification and Architecture: Architecture Design Process, Architecture Definition, Architecture Analysis and Evaluation.
- Requirements and Testing Process: Requirements Verification, Requirements Validation, Requirements Lifecycle Management (Requirement Management).
- Tools: Tool Characteristics, Choice of Tool.
- Life Cycle and Requirements Engineering: Product Life Cycle, Process Models.
- Project and Risk Management: Using Requirements Engineering in projects, Risk Management

Course duration and delivery methods:

20 hours over three days - Mode 1 - Mode 2 - Mode 3 – Mode 4

Course price:

No. of Participants	List Price (per person, excluding VAT)
1	€ 920
2	€ 900
3	€ 880
From 4 and above	€ 850

TESTING

This 24-hour course will enable you to understand the Testing fundamental concepts. This is a process that is not limited to test execution, but includes test planning, analysis, design and implementation, reporting on tests results and evaluating the test object quality.

Course content:

The course is aligned with ISTQB® Certified Tester Foundation Level Syllabus and presents content aimed at passing the ISTQB® CTFL certification exam.

Below is a non-exhaustive list of topics covered in the course:

- Testing basics: Why Testing is Necessary; What is Testing; Testing General Principles; Testing Process Basics; Testing Psychology; Code of Ethics.
- Life Cycle Testing: Life Cycle; Test Levels; Testing Types.
- Static Techniques.
- Test Design Techniques: Test Development Process; Categories; Black Box Techniques; White Box Techniques.
- Testing Organisation: Independence; Test Manager and Tester.
- Testing Estimation and Planning: Planning; Estimation; Strategies and Approaches.
- Control and Progress Monitoring: Reporting; Testing Control.
- Configuration Management
- Testing Risk
- Management of Incidents
- Tools

Course duration and delivery methods:

3 days - Mode 1 - Mode 2 - Mode 3 - Mode 4

Course price:

No. of participants	List Price (per person, excluding VAT)
1	€ 750
2	€ 720
3	€ 680
From 4 and above	€ 650

BUSINESS ANALYSIS

This 24-hour course will teach fundamental concepts of Business Analysis as a set of tasks, knowledge, tools and techniques needed to identify business needs and problems solutions.

Business Analysis has a strong overlap with requirements engineering but focuses on identifying the changes to an organisation to achieve strategic objectives (including strategies, structures, policies, processes, and information systems).

Course content:

The course is aligned with the IQBBA® Certified Business Analyst Foundation Level Syllabus and presents content aimed at passing the IQBBA® CFLBA certification exam.

Below is a non-exhaustive list of topics covered in the course:

- Business Analysis Basics.
- Strategy Definition.
- Business Analysis Process Management.
- Requirements Engineering in Business Analysis.
- Solution Evaluation and Optimisation.

Course duration and delivery methods:

20 hours over three days - Mode 1 - Mode 2 - Mode 3 – Mode 4

Course price:

No. of participants	List Price (per person, excluding VAT)
1	€ 780
2	€ 730
3	€ 700
From 4 and above	€ 680

PROJECT MANAGEMENT

This 48-hour course will guide you through project management methods and practices.

The course is inspired the PMI® Project Management Institute and described in the PMBOK Guide®.

Course content:

The course is aligned with the PMI® "A Guideline to the Project Management Body of Knowledge" and presents content aimed at passing the PMP® certification exam¹.

Below is a non-exhaustive list of topics covered in the course:

- Introduction to the Project Management Framework.
- Integration Management.
- Scope Management.
- Schedule Management.
- Cost Management.
- Quality Management.
- Resource Management.
- Communication Management.
- Risk Management.
- Procurement Management.
- Stakeholder Management.
- Professional Responsibility.

Course duration and delivery methods:

48 hours over six days - Mode 1 - Mode 3 – Mode 4

Course price:

No. of participants	List Price (per person, excluding VAT)
1	€ 1,300
2	€ 1,240
3	€ 1,170
From 4 and above	€ 1,140

¹ The Project Management courses are not officially recognised by the Project Management Institute (PMI®) since accreditation as a Registered Education Provider for the provision of training courses for the PMP level is still ongoing..

FRONT END/BACK END SOFTWARE DEVELOPMENT

This 24-hour course will guide you through software architectures, technologies and languages and best programming practices in Front End - Back End architectures.

Course content:

The course is divided into two modules – Front End and Back End

1. Front End: Learn how to use the working environment for front-end projects based on Angular.I0 (nodejs, npm, angular-cli, development ide). Using typescript. Application structure and life cycle of an app in Angular. Layout with Bootstrap. Definition and life cycle of components. Form validation in Angular. Definition and consumption of services. Event management. Route management and use in Angular.I0.
2. Back End: The Back End can be customised for two different technologies:
 - a. Java Spring: The course provides basic skills to address Spring framework projects for the deployment of MVC model-based web solutions implemented by Spring and microservice solutions based on Spring REST services. Outbound skills will cover the main Spring-implemented patterns, and how they are mapped on the framework. Among the transferred skills attention will be paid to the Bean life cycle and components used in the framework, Spring's transactional model, ORM use, such as Hibernate, and server-side validation on Spring.
 - b. .net MVC: The course provides basic skills to address .NET MVC framework projects, for the deployment of MVC model-based web solutions implemented by .NET and microservice solutions based on .NET REST services. The main outbound skills include the study of the MVC pattern and how it is mapped using .NET, applications structure, definition of web and REST controllers, study of forms with asp .NET and use of Razor, routing and filters, security and authentication with ASP .NET Identity, structure and use of Entity Framework such as ORM, entity management and database.

Course duration and delivery methods:

3 days - Mode 1 - Mode 3 – Mode 4

Course price:

No. of participants	List Price (per person, excluding VAT)
1	€ 720
2	€ 690
3	€ 650
From 4 and above	€ 630

EMBEDDED SYSTEMS

This 16-hour course introduces you to the embedded systems world by providing architecture and software development fundamentals.

Course content:

Below is a non-exhaustive list of topics covered in the course:

- Introduction to Embedded Systems
- Microcontroller systems architecture
- Configuration and use of peripherals
- Interrupt management
- Introduction to RTOS
- Tasks Management
- ARM Cortex Microcontrollers
- Exercises to consolidate the topics covered

Course duration and delivery methods:

2 days - Mode 1 - Mode 3 – Mode 4

Course price:

No. of participants	List Price (per person, excluding VAT)
1	€ 720
2	€ 690
3	€ 650
From 4 and above	€ 630

MODEL BASED DESIGN

This 16-hour course introduces you to the software development world by using Model Based Design (MBD) tools with appropriate modelling rules, aimed at automatic generation of ANSI C code.

Course content:

Below is a non-exhaustive list of topics covered in the course:

- Introduction to MBD
- Mathworks tools
 - Matlab
 - Simulink
 - Stateflow
- MAAB and MISRA AC SLSF rules
- Exercise: development of first order LPF
- Automatic code generation
 - Real Time Workshop
 - dSPACE TargetLink + Data Dictionary
 - Generated code optimisation

Course duration and delivery methods:

2 days - Mode 1 - Mode 3 – Mode 4

Course price:

No. of participants	List Price (per person, excluding VAT)
1	€ 720
2	€ 690
3	€ 650
From 4 and above	€ 630

CYBERSECURITY

The course lasts 16 hours and is divided into four macro-modules. These cover the cybersecurity domain, analysing the reasons and strategies that lead to a defence plan definition and provide an overview of technological solutions.

Course content:

The course is aligned with the regulations and guidelines dictated by the international NIST and ISO standards and describes principles and solutions to implement a cyber-defence strategy against attacks on systems and networks.

It will illustrate the reference architectures and today's deployment solutions. It will refer to on-prem, cloud-based and hybrid infrastructures at the base of typical Critical Infrastructure architectures.

Below is a non-exhaustive list of topics covered in the course:

- Fundamentals of Information Security (risk management, security policies, data protection, networking, encryption, phishing, and malware);
- Overview of known attacks on systems and network infrastructures;
- Analysis of Infrastructure Assessment Methodologies;
- Incident Handling and cyber-attack management procedures;
- Passive (A/V, A/Malware, Firewalls) and active (Endpoint Detection and Response - EDR, Network Threat Analysis - NTA, Security Information and Event Management- SIEM, User and Entity Behaviour Analytics - UEBA) Cyberdefence reference architectures
- On-prem, cloud-based and hybrid Cyberdefence solutions

Course duration and delivery methods:

2 days – Mode 1 – Mode 3 – Mode 4

Course price:

No. of participants	List Price (per person, excluding VAT)
1	€ 720
2	€ 690
3	€ 650
From 4 and above	€ 630

UX RESEARCH & USER TESTING

The three-day course has been designed to provide UX Research techniques and methods to define the UX requirements for a User Experience project.

Course content:

Below is a non-exhaustive list of topics covered in the course:

- qualitative and ethnographic research (focus group, interviews, shadowing, digital ethnography);
- requirements collection workshop with stakeholders;
- various types of analytics (digital and visual analytics);
- CRO activities, supported by A/B testing;
- user testing (task analysis, eyetracking studies) in the laboratory and remotely.

It will help participants to isolate the preferable method for each phase, and which procedure allows going from problem identification to a research plan, by choosing indicators and methods. In this way the UX requirements of a User Experience project are defined

Course duration and delivery method:

3 days - Mode 4 - From six participants and above

Course price:

No. of participants	List Price (per person, excluding VAT)
From 6 and above	€ 900

UX DESIGN & UI DESIGN

The three-day course has been designed to provide the essential knowledge for UX Designer training by transferring the techniques and methodologies necessary for designing digital products and services using User Centered Design.

Course content:

Below is a non-exhaustive list of topics covered in the course:

- UX Design: you will deepen the design activities that precede the finalisation of the UI and prototyping. The course covers information architecture, interaction flow/workflow and wireflows, wireframe and wireframing, work process, and useful resources.
- UI Design: an introduction to visual communication management elements and design finalisation, including communication of assets to other involved teams.

Course duration and delivery method:

3 days - Mode 4 - From six participants and above

Course price:

No. of participants	List Price (per person, excluding VAT)
From 6 and above	€900

DATA SCIENCE

Course objectives – The modern data analysis has changed considerably in the past few years. New technologies have been developed to manage large amounts of data alongside with innovative techniques and data analysis methods. The knowledge of the main technologies applied to the world of data science is essential to identify the relevant questions, be able to collect data from heterogeneous sources, organize the large volume of information and translate results into solutions. This course offers an overview of modern data science and the new technologies applied in a business context.

Module A – Introduction to Data Analysis

- Regression and bayesian analysis
- Linear regression: assumptions of the regression models
- Correct and incorrect use of regression models
- Bayesian analysis: when it is convenient to use it
- Exercises: application of regression and bayesian analysis to practical cases

Module B – Machine Learning

- Supervised vs. unsupervised learning
- Regression & Classification
- Clustering
- Gradient boosting
- Cross Validation
- Exercises: steps needed to develop supervised and unsupervised models

Module C – Big Data

- How to build a network capable of managing Big Data
- Main frameworks for Big Data: Hadoop, Dask & Spark
- Resilient Distributed Datasets, Dataframes & Mlib
- Exercises: how to perform data analysis with big data technology

Course duration and delivery method:

3 days – Delivery method in classroom and remotely

Course price:

No. Participants	List Price (per person, excluding VAT)
From 4 and above	€ 900,00

DATA SCIENCE ADVANCED

Course objectives – The accurate data analysis involves the application of standard methodologies and more advanced techniques that allow the optimal extraction of information from the available data. These techniques must be combined with the latest technologies in the sector, developed to manage big-data, structured and unstructured data. The participant will learn the state of the art techniques of data science through theoretical lessons and practical workshops. The course will allow the participant to understand how to make optimal decisions, learn how to manage advanced statistical techniques and discover some tricks used in the field.

Module A – Advanced Techniques for Data Analysis

- Time Series
- Statistical Distributions: which distributions to use
- Gaussian Mixture Models
- Exercises: how to extract information from noisy data in an efficient way

Module B – Big Data & Analytics

- Cloud Computing & Big Data
- Analytics for Big Data – Main Frameworks: TensorFlow & Pytorch
- Apache Hadoop & Spark
- Exercises: how to analyze big data in various practical situations

Module C – Performance & Optimization

- Feature engineering: Data Preparation Techniques
- Optimization of hyper-parameters
- Techniques to identify predictive variables – Feature importance analysis (SHAP values, ELI5)
- Data visualization
- Exercises: optimization of results and creation of a dashboard

Course duration and delivery method:

3 days – Delivery method in classroom and remotely

Course Price:

No. of participants	List Price (per person, excluding VAT)
From 4 and above	€ 1100,00

BLOCKCHAIN

Course objectives – The course is aimed at those people who want to learn the blockchain technology and create new solutions in a business context. An overview of Blockchain will be provided along with its weak and strong points and various theoretical and practical examples to clarify when it is convenient to use it in the business world.

Module A – What is Blockchain

- Blockchain Technology– new possibilities and opportunities
- What kind of problems are solved by Blockchain – data access
- Blockchain as a data engineering solution
- Exercises: the working principles of a blockchain with practical applications

Module B – Application of the Blockchain Technology

- Cryptography & Blockchain
- Offensive vs. defensive strategies: when is it convenient to use Blockchain
- Exercises: calculation of a blockchain – case-study

Module C – Blockchain in the Business World

- Permissionless vs. Permissioned
- The open-source Hyperledger project– overview & main functionalities
- Exercises: creation of a first blockchain

Course duration and delivery method:

3 days – Delivery method in classroom and remotely

Course Price:

No. of participants	List Price (per person, excluding VAT)
From 4 and above	€ 1000,00

3D DESIGN – TOOLS AND PRINCIPLES

This course, by the duration 24 hours, introduces the world of three-dimensional design using Computer Aided Design (CAD) tools, with emphasis on the common aspects of the main software currently found on the market.

Course content:

Below follows a non-exhaustive list of the topics covered in the course:

- Introduction and overview of CAD software
 - Overview of the main 3D software and first approach
- 2D Drawing
 - Creation and modification of 2D entities
 - Geometric constraints, dimensions and symbols
- Solid modeling
 - 3D work environment
 - Sketch, creation and modification on solids
- Advanced solid modeling
 - Boolean operations
 - Sheet metal and piping
 - Analysis tools
- Drafting
 - View creation and modification
 - Section views and sheet metal flat pattern
- Assemblies
 - Conceptual approach
 - Positioning constraints
 - Exploded views and simplified representations
 - Analysis tools
- Basics of surface modeling
 - Mathematical concepts
 - Types and modification of curves and surfaces
 - Analysis tools

Course duration and delivery method:

3 Days – Mode 1 – Mode 3 – Mode 4

Course Price:

No. of participants	List Price (per person, excluding VAT)
1	€ 800,00
2	€ 780,00.
3	€ 760,00.
From 4 and above	€ 720,00

CODING HTML - CSS

The course, lasting 24 hours and divided into 2 macro-modules, aims to frame the domain of web applications.

The Web Application is today the solution most adopted by companies, more and more companies require Web Apps to satisfy their customers. The correct User Experience make the software more usable, saving time in use and increasing user satisfaction.

Course Content:

The course aims to train learners by orienting them in the world of Web Technologies, specifically **HTML** and **CSS**, establishing the basis to make their start-up fast and functional.

A non-exhaustive list of the topics covered in the course is the following:

- HTML
 - Tools
 - Sintax, Element and Attribute
 - Tags, Table and List, Charset, HTML v5
- CSS
 - Sintax and Selector
 - Links, Table, Box Border
 - Text and Fonts
 - Margin and Padding
 - Display e Opacity Position Media Types, CSS3 Animation

Course duration and delivery method:

3 days - Mode 1 – Mode 3 – Mode 4

Course Price:

No. of participants	List Price (per person, excluding VAT)
1	€ 720,00
2	€ 690,00
3	€ 650,00
From 4 and above	€ 630,00

PRINCIPLES OF CRM

In this 16-hour course, the main features and functionalities of a Customer Relationship Management (CRM) will be presented, with a focus on the Salesforce cloud CRM.

Course content:

- Introduction and overview of CRM software
- Domains
 - CRM On-Premise vs CRM Cloud
- CRM contributions to companies
 - Identify and classify leads
 - Increase turnover from existing customers
 - Offer better customer support
 - Improve products and services
 - Application contexts
- Main CRM software
 - Salesforce
 - Oracle
 - Microsoft dynamics
 - Hubspot
 - Bpm'online
- Introduction and overview of CRM Salesforce
- Standard Salesforce Objects
- Application
 - E-commerce
 - Customer Service
 - App development
 - Marketing
 - Sales
- In-depth analysis
 - Marketing Cloud
 - Sales Cloud

Course duration and delivery methods:

2 days – Delivery method in classroom and remotely

Course Price:

No. of Participants	List Price (per person, excluding VAT)
1	€ 500,00
2	€ 470,00
3	€ 430,00
From 4 and above	€ 400,00

C++ & QT/QML FRAMEWORKS

This course, with a duration of 48hrs (optionally 64hrs), offers an overview of the multiplatform development of graphical applications using the Qt framework, with an introduction to object oriented languages, more deeply oriented on C++ language. Afterwards it is aimed at the comprehension of the Qt framework logics and, optionally, at the QML language for the development of UIs.

Course content:

The main objectives of the course are the principles of Object Oriented Programming (OOP), the C++ language and an introduction to the Qt framework for multiplatform development, either for the backend part or for graphics user interfaces (UI) with the use of QtWidgets libraries.

Optionally, an additional module related to the QML language can be added, to obtain competencies on this new way to develop UIs, with the aim to also explain the differences between QtWidgets and QML.

Following is a non-exhaustive list of topics:

- Introduction to OOL (Object Oriented Languages) and Classes
- Programs structure
- The C++ language
- Qt Framework
- Widgets
- QThread
- QML (optional)

Course duration and delivery method:

6 days (8 with the optional QML module) – Mode 1 – Mode 3 – Mode 4

Course Price:

No. of participants	List Price (per person, excluding VAT)
1	€ 1.100,00
2	€ 1.000,00
3	€ 950,00
From 4 and above	€ 900,00

FRAMEWORK .NET / C# / ASP NET

The course, lasting 24 hours and divided into 7 modules, aims to provide the basis for the development of .Net and Asp Net applications by providing an overview of the new Microsoft frameworks.

Course content:

The purpose of the course is to teach the architectures, development techniques and good practices for the development of console applications, web applications and web APIs with .Net framework.

A non-exhaustive list of the topics covered in the course is the following:

- What is .Net?
- Structure and Architectures of .Net
- Design patterns
- Unit Test and Mock
- Asp .Net Core
- Task and asynchronous development
- Entity Framework

Course duration and delivery methods:

3 days – Delivery method in classroom or remote.

Course Price:

No. of participants	List Price (per person, excluding VAT)
1	€ 860,00
2	€ 820,00
3	€ 800,00
From 4 and above	€ 770,00

DATABASE - SQL

The course aims to provide the basis for the management and manipulation of SQL databases. The duration of the course is 40 hours and is divided into 6 modules.

Course content:

The purpose of the course is to teach the fundamental notions for understanding, modeling and managing relational databases.

A non-exhaustive list of the topics covered in the course:

- Introduction to databases and SQL
- Data modeling
- Normalization
- Database objects
- Relationships
- Database performance

Course duration and delivery methods:

5 days – Delivery method in classroom and remotely

Course Price:

No. of Participants	List Price (per person, excluding VAT)
1	€ 750,00
2	€ 720,00
3	€ 680,00
From 4 and above	€ 650,00

CLOUD COMPUTING

The course, lasting 16 hours and divided into 4 macro-modules, aims to frame the domain of Cloud Computing, analyzing the motivations and strategies that lead to the definition of a cloud architecture with an overview of the technological services offered.

Course contents:

The course is designed to introduce students to the Cloud Computing approach and to the possible solutions that can be implemented in this context. The reference architectures and the possible deployment solutions that exist today will be illustrated: reference will be made to on-prem, cloud-based and hybrid infrastructures at the basis of the typical architectures of Critical Infrastructures. A non-exhaustive list of topics covered in the course is as follows:

- Fundamentals of Cloud Computing;
- Horizontal and Vertical Scaling;
- Automation and Event-Driven;
- Decoupling and High Availability;
- Reference Architectures and Security
- Vendor Comparison

Duration and Class Style:

2 days – Face to face or remotely held

Participants	Pricing (price per person, IVA excluded)
1	€ 720,00
2	€ 690,00
3	€ 650,00
Starting from 4	€ 630,00

MS-PROJECT

The course aims to train learners on the discipline of Project Management and its practical application through the use of Microsoft Project® software, an essential tool in the daily management of project activities, through the study of the most modern Project Management standards.

Course content:

The course is aligned with the most modern theories of Project Management, such as PMI® and PRINCE2® standards. The course is split into theoretical lessons that include the study of the main Knowledge-Areas and the main Process Groups followed by the detailed analysis of the tools and characteristics made available by Microsoft-Project® such as activity diagrams, advanced scheduling, " resource allocation, project cost management and verification tools. The final lessons will be dedicated to the practical application of the concepts on a sample project.

Class short list:

- Module 1: Project Management Framework
- Module 2: Project Management Tools
- Module 3: Microsoft Project – Activities
- Module 4: Microsoft Project – Resources management
- Module 5: Microsoft Project – Reports
- Module 6: Validation tools
- Module 7: Exercises and Examples

Course duration and delivery methods:

2 days - Delivery method in classroom and remotely

Course Price:

No. of Participants	List Price (per person, excluding VAT)
1	€ 720,00
2	€ 690,00
3	€ 650,00
From 4 and above	€ 630,00

LABVIEW

The course, lasting 24 hours and divided into 7 macro-modules, aims to train learners on the use of the NI LabVIEW tool, starting from the basics up to advanced programming aspects. The focus of the course is the use of LabVIEW as a support tool for laboratory activities.

Course content:

The course is aligned to the official training provided by National Instruments and aims to train on programming in the graphic language typical of LabVIEW. Starting from the basics of programming common to different programming languages, continuing to study the use of specific LabVIEW tools. The main goal is to provide the necessary autonomy to use LabVIEW in laboratory activities using hardware platforms from National Instruments and beyond.

A non-exhaustive list of the topics covered in the course is the following:

- Introduction to LabVIEW
- Control of the execution flow (Iterations for data acquisition)
- Data types and I / O management
- Advanced programming (SubVI creation, State machines)
- Parallel Loop Management, Event - Driven Programming

Course duration and delivery method:

3 days – Delivery method in classroom and remotely

Course Price:

No. of participants	List Price (per person, excluding VAT)
1	€ 750,00
2	€ 720,00
3	€ 680,00
From 4 and above	€ 650,00

FRAMEWORK YOCTO (EMBEDDED LINUX)

The course, lasting 24 hours and divided into 2 macro-modules, aims to introduce the use of a Linux distros development environment, Yocto Project. Specifically the development of embedded operating systems, through theoretical explanations and practical exercises with the goal of making the course participants able to create a customized Linux distro.

Course content:

The course aims to describe principles and solutions for implementing a customized operating system from a Linux distro. The tools useful for using the Yocto Project development environment will be showed: the Linux environment with its commands, programs and services, Yocto's layered architecture, the components and tools of the Poky reference distribution.

Following, a non-exhaustive list of the topics covered in the classes:

- Overview of open source and Linux based distro operating systems;
- Embedded operating systems, shells, software and services;
- Overview of Yocto Project and its components;
- Layered modeling and instrumentation to get a customized distro;
- Coding practice

Course duration and delivery methods:

3 Days - Delivery method in classroom and remotely

Course Price:

No. of Participants	List Price (per person, excluding VAT)
1	€ 750,00
2	€ 720,00
3	€ 680,00
From 4 and above	€ 650,00

IOT AND EDGE COMPUTING (IoT-EC)

The course addresses industry professionals to master the InternetofThings-EdgeComputing technologies and architectures within the 4.0 technology landscape. Through the analysis of theoretical and actual case studies, the distinguishing hardware and software design characteristics of IoT-EC solutions will be discussed.

Course contents:

The course is aligned with the state-of-the-art of technological solutions in the field of X-4.0 landscape to allow learners to have an overall vision of the resources, their limits and the information flow involved in order to implement an X-4.0 solution that is both performing and suitable for the specific purpose. The course also includes a technical study on radio technologies and their typical topologies, and an in-depth study of the middleware of Edge Devices.

Particular attention is paid to the legislative aspects of the data usage.

Class short list:

- Module 1: Introduction;
- Module 2: IoT architecture and fundamental modules;
- Module 3: Technologies for the IoT-EC ecosystem;
- Module 4: EDGE and IoT: a new computational paradigm;
- Module 5: Design of an EC solution: how to tackle resource integration issues;
- Module 6: Design of middleware for EC;
- Module 7: Practical applications: Creation of an IoT-EC solution for Big Data Analytics;
- Module 8: Legislative aspects of IoT applications operating in the context of Edge Computing.

Course duration

Two (2) days Face to face or remotely held

Prices:

Participants	Pricing (price per person, IVA excluded)
1	€ 800,00
2	€ 780,00
3	€ 760,00
Starting from 4...	€ 720,00

MACHINE LEARNING

Objectives – Artificial Intelligence (AI) and Machine Learning (ML) in particular are fundamental tools for any modern data analyst and scientist. Such tools represent the backbone of any system that makes statistical and algorithmic predictions. The attendee will learn state-of-art ML techniques through a series of theoretical and practical lectures. Specifically, the course will present the most popular methods for classification, regression and clustering as well as the most common preprocessing techniques. The latter will be presented as a key toolkit to turn a standard ML algorithm into a successful one for the specific application at the hand.

Part A – Supervised Learning

- Introduction to AI and ML.
- Classification: Problem, Performances metrics, Examples.
- Classification algorithms: k-NN, SVM, Decision Tree.
- Regression: Problem, Performances metrics, Examples.
- Regression algorithms: Regularized Least Square, k-NN regression.
- Lab: classification and regression in action.

Part B – Unsupervised Learning

- Clustering: Problem, Performances metrics, Examples.
- Clustering Algorithms: k-means, hierarchical clustering, correlation clustering.
- Dimensionality Reduction: Problem, Performances metrics, Examples.
- Dimensionality Reduction Algorithms: Principal Component Analysis and Random Projections.
- Lab: clustering and dimensionality reduction in action.

Part C – Performance Evaluation & Preprocessing

- Preprocessing: feature scaling, normalization, cleaning, filtering, feature selection and generation.
- How to evaluate a ML algorithm: K-Fold Cross Validation, Train-Test-Split, Learning Curves, Overfitting vs. Underfitting.
- Lab: a case study.

Duration and Class Style:

2 days – Face to face or remotely held

Participants	Pricing (price per person, IVA excluded)
1	€ 720,00
2	€ 690,00
3	€ 650,00
Starting from 4	€ 630,00

PROFESSIONAL ACADEMY

Modis delivers specialised technical training for different areas of the Engineering, IT and Life Science sectors.

The currently available Professional Academies in Pharma are:

Training Title
cGMP & GAMPV
Risk Management (ICH Q9)
Validation & Qualification
Data Integrity & Data Life Cycle
Computerised System Validation
GxP System Life Cycle

cGMP & GAMPV

This one-day course will enable you to fully understand the principles of cGMP (Current Good Manufacturing Practice) and GAMP V (Good Automated Manufacturing Practice), which are the benchmarks for each stage of the pharmaceutical manufacturing value chain.

The course is intended for anyone working in the pharmaceutical and chemical-pharmaceutical field concerned with quality issues.

Course content:

The course focuses on describing the structure of the regulations and indicating a series of operational tools that will enable participants to identify the most appropriate ways to build a concrete and reliable quality system.

Starting with the regulatory bodies, you will get an understanding of standard pharmaceutical environment terms, diving further into the contents for personnel who must be properly trained and then validation documentation.

The following is a list of some, yet not all, of the subjects covered in the course:

- Reference standards and regulatory bodies in pharmaceuticals
- Definitions and meanings
- Contents and structure of cGMP
- From GAMP 4 to GAMP 5
- Validation documentation
- Contents and structure of GAMP 5

Course duration and delivery methods:

1 day – Method 1 – Method 2 – Method 3

Course price:

Participants	List Price (per person, excluding VAT)
1	€ 720,00
2	€ 690,00
3	€ 650,00
at least 4	€ 630,00

RISK MANAGEMENT (ICH Q9)

This one-day course will give you a cross-sectional view on risk management approaches and methodologies.

The course is intended for anyone working in the pharmaceutical and chemical-pharmaceutical field concerned with risk management topics.

Course content:

The course aims to describe the approach and methodology for effective risk management.

Starting with the ICH Q9, the benchmark standard, the tools for applying risk analysis will be analysed and understood, with a view to bolstering theoretical skills in risk management and the model for applying these methodologies.

standard pharmaceutical environment terms, diving further into the contents for personnel who must be properly trained and then validation documentation.

The following is a list of some, yet not all, of the subjects covered in the course:

- Reference standards and regulatory bodies in pharmaceuticals
- Definitions and meanings
- Structure of the ICH Q9
- Corpus of the document: definition of quality risk assessment
- Annex 1: How it is carried out and the existing methodologies for conducting quality risk assessments
- Annex 2: where to apply quality risk assessments

Course duration and delivery methods:

1 day – Method 1 – Method 2 – Method 3

Course price:

Participants	List Price (per person, excluding VAT)
1	€ 820,00
2	€ 800,00
3	€ 780,00
at least 4	€ 750,00

VALIDATION & QUALIFICATION

This one-day course first provides an introduction to GMP and then focuses on the knowledge, skills and flows underlying validation and qualification activities.

The course is intended for anyone working in the pharmaceutical and chemical-pharmaceutical field interested in learning more about the guidelines and principles of validation and qualification.

Course content:

The course describes the structure of regulations and presents the methodology and approach for structuring a correct, sustainable and reliable qualification and validation process.

Starting with the regulatory bodies, the basic concepts of GMP will be covered before delving into the details of the regulations, methodology, documentation and activities that must be performed and considered in the qualification and validation approach.

The following is a list of some, yet not all, of the subjects covered in the course:

- Reference standards and regulatory bodies in pharmaceuticals
- Definitions and meanings
- Theory of the qualification and validation process
- Content and structure of Annex 11, Annex 15, GAMP5 and 21 CFR Part 11
- Qualification and validation documentation

Course duration and delivery methods:

1 day – Method 1 – Method 2 – Method 3

Course price:

Participants	List Price (per person, excluding VAT)
1	€ 820,00
2	€ 800,00
3	€ 780,00
at least 4	€ 750,00

DATA INTEGRITY & DATA LIFE CYCLE

This one-day course will enable you to fully understand the principles for the proper handling of critical electronic and paper GMP data.

The course is intended for anyone working in the pharmaceutical and chemical-pharmaceutical field concerned with data integrity.

Course content:

The course focuses on describing the structure of the regulations and indicating a series of operational tools that will enable participants to identify the most appropriate ways to manage data.

The following is a list of some, yet not all, of the subjects covered in the course:

- Reference standards and regulatory bodies in pharmaceuticals
- Definitions and meanings
- Introduction to Data Integrity
- Scope of application
- Data management
- Data Life Cycle
- ALCOA+
- Data Integrity in paper documents
- Data Integrity in computerised systems

Course duration and delivery methods:

1 day – Method 1 – Method 2 – Method 3

Course price:

Participants	List Price (per person, excluding VAT)
1	€ 920,00
2	€ 900,00
3	€ 880,00
at least 4	€ 850,00

COMPUTERISED SYSTEM VALIDATION

This one-day course first provides an introduction to GMP and then focuses on the knowledge, skills and flows underlying computerised system validation activities.

The course is intended for anyone working in the pharmaceutical and chemical-pharmaceutical field interested in learning more about the guidelines and principles of validation.

Course content:

The course describes the structure of regulations and presents the methodology and approach for structuring a correct, sustainable and reliable system validation process.

Starting with the regulatory bodies, the basic concepts of GMP will be covered before delving into the details of the regulations, methodology, documentation and activities that must be performed and considered in the computerised system validation approach.

The following is a list of some, yet not all, of the subjects covered in the course:

- Reference standards and regulatory bodies in pharmaceuticals
- Definitions and meanings
- Validation process theory
- GAMP 5 system categorisation
- Legislation in the EU/USA
- Validation documentation
- Test performance methods

Course duration and delivery methods:

1 day – Method 1 – Method 2 – Method 3 – Method 4

Course price:

Participants	List Price (per person, excluding VAT)
1	€ 750,00
2	€ 720,00
3	€ 680,00
at least 4	€ 650,00

GxP SYSTEM LIFE CYCLE

This one-day course will focus on defining the approach, strategy and life cycle for validating critical GxP systems.

The course is intended for anyone working in the pharmaceutical and chemical-pharmaceutical field concerned with defining a methodology for managing and validating critical GxP systems.

Course content:

This course describes the methodology and approach for structuring a correct and reliable system validation process.

Starting with the regulatory bodies, the basic concepts of GMP and in particular the core documents of the critical GxP systems viewpoint will be covered.

The following is a list of some, yet not all, of the subjects covered in the course:

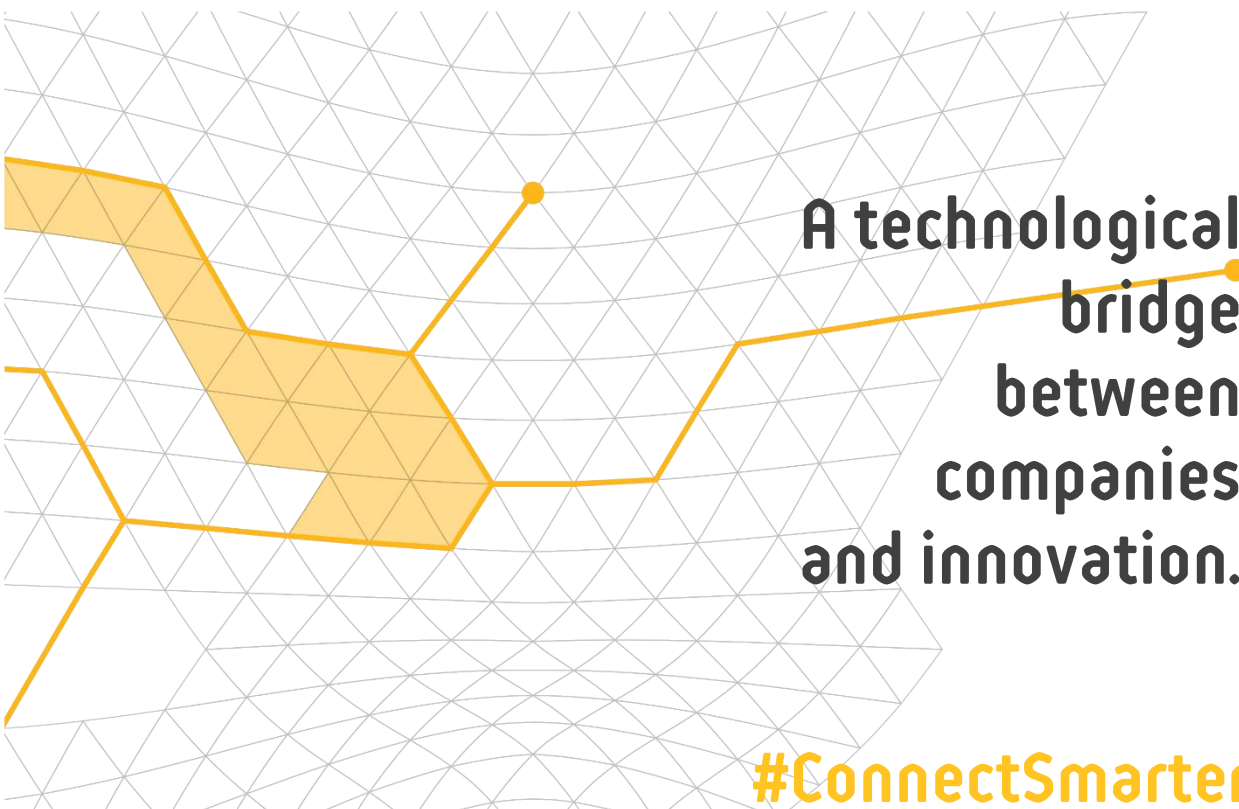
- Reference standards and regulatory bodies in pharmaceuticals
- Definitions and meanings
- GxP System Validation Strategy and Life Cycle
- Organisational structure, key roles and main responsibilities of the Validation Team
- Definition of criticality and complexity criteria
- Cornerstone system life cycle documents

Course duration and delivery methods:

1 day – Method 1 – Method 2 – Method 3 – Method 4

Course price:

Participants	List Price (per person, excluding VAT)
1	€ 720,00
2	€ 690,00
3	€ 650,00
at least 4	€ 630,00



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bridge
between
companies
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The future that awaits us will feature smart devices, cities, and activities. That is why the convergence of IT, Engineering and Life Sciences will become increasingly essential. For this reason, Modis technological consulting is increasingly integrated. Modis supports its partners develop innovative services and products by managing the project cycle, from the requirement definition to the implementation and maintenance phases. Modis works with key international companies in the Automotive, Infrastructure & Transportation, Aerospace, Avionics & Defence, Banking & Insurance, Life Sciences, Pharma & Medical devices, Telecommunications & Media, Robotics & Automations, and Energy sectors.

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