

DATOS GENERALES

Curso académico	Curso 2024/2025
Tipo de curso	Microcredencial Universitario
Número de créditos	14,00 Créditos ECTS
Matrícula	260 euros (importe precio público pendiente de aprobación por el Consejo Social Universitat de València.) Preu general
Requisitos de acceso	Tourism professionals in general, seeking to strengthen their technological profile.
Modalidad	Presencial
Lugar de impartición	ETSE-UV
Horario	Lunes a viernes, de 15:30h a 20:30h
Dirección	
Organizador	0
Dirección	José Rafael Magdalena Benedito Profesor/a Titular de Universidad. Departament d'Enginyeria Electrònica. Universitat de València
Plazos	
Preinscripción al curso	Hasta 07/03/25
Fecha inicio	Marzo 25
Fecha fin	Mayo 25
Más información	
Teléfono	961 603 000
E-mail	informacion@adeituv.es

PROGRAMA

[Introduction to AI](#)

Fundamentals of AI:

1. Introduction to AI
 2. Types of AI
 3. Basic Algorithms and Techniques
- Machine Learning and Practical Applications
1. Supervised and Unsupervised Learning
 2. Neural Networks and Deep Learning
 3. Ethics and the Future of AI

[Programming in AI](#)

Introduction to Python and R

1. Python Fundamentals
2. R Fundamentals

Advanced Programming in Python and R

1. Python Functions and Modules
2. Functions and Packages in R

Data Manipulation and Analysis

1. Python Data Manipulation
2. Data Manipulation in R

Introduction to Machine Learning

1. Machine Learning in Python
2. Machine Learning in R

Practical Projects and Applications

1. Python Project
2. Project in R

Practical Activities

- Exercises and practical examples during each section
- Group discussions on case studies
- Mini-projects to apply the concepts learnt

[ML algorithms and examples. Generative AI](#)

Introduction to Machine Learning Algorithms:

1. Machine Learning Fundamentals
2. Data Preprocessing

Classification Algorithms:

1. Classification in Python
2. Classification in R

Day 3: Regression Algorithms:

1. Regression in Python
2. Regression in R

Clustering Algorithms:

1. Clustering in Python
2. Clustering in R

Introduction to Generative AI:

1. Basic Concepts of Generative AI
2. Implementation of GANs in Python

Natural Language Processing (NLP):

1. NLP Fundamentals
2. NLP Models in Python

Practical Projects in Python:

1. Classification Project
2. Generative AI Project

Practical Projects in R:

1. Clustering Project
2. NLP Project

Practical Activities:

- Exercises and practical examples during each section
- Group discussions on case studies
- Mini-projects to apply the concepts learnt

[Commercial tools for ML: examples](#)

Introduction

1. Overview of Trading Tools
2. Free vs. Commercial Tools

Google Colab

1. Exploring Google Colab
2. Modelling and Deployment in Google Colab

Microsoft Azure ML Free Tier

1. Introduction to Microsoft Azure ML Free Tier
2. Modelling and Deployment on Azure ML Free Tier

AWS Free Tier

1. Getting to know AWS Free Tier
2. Modelling and Deployment on AWS Free Tier

Practical Activities

- Exercises and practical examples during each section
- Group discussions on case studies
- Mini-projects to apply the concepts learnt

[Computer network architecture](#)

[Web servers and services](#)

Introduction to Web Servers and Web Services

1. What are Web Servers and Web Services?
2. Basic Web Server Components

Basic Web Server Configuration

1. Apache Installation and Configuration

Installation and Configuration of Nginx

- Installation of Nginx on different operating systems
- Basic Configuration and Configuration Files
- Serving Static Web Pages

Web Services and Dynamic Applications

1. Introduction to Dynamic Web Applications
2. Configuring Servers for Dynamic Applications

Web Services in the Cloud

1. Introduction to Cloud Computing
2. Configuration of Web Services in the Cloud

Management and Maintenance of Web Servers

1. Monitoring and Maintenance of Servers
2. Scalability and High Availability

Practical Projects and Case Studies

1. Complete Web Server Configuration Project
2. Case Studies and Group Discussion

Practical Activities

- Exercises and practical examples during each section
- Group discussions on case studies
- Mini-projects to apply the concepts learnt

[Database management and security](#)

Introduction to Databases

1. What is a Database?
 2. Components and Architecture of a Database
- #### Database Design and Modelling
1. Relational Database Design
 2. NoSQL Database Design

Database Management

1. Relational Database Administration
2. NoSQL Database Administration

Cybersecurity Fundamentals

1. Introduction to Cybersecurity
2. Basic Security Measures

Database Security

- Database Security Fundamentals 2.
2. Advanced Security Practices

Practical Projects and Case Studies

1. Relational Database Management Project
2. NoSQL Database Management Project

Practical Activities

- Exercises and practical examples during each section
- Group discussions on case studies
- Mini-projects to apply the concepts learnt

PROFESORADO

Miguel García Pineda

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OBJETIVOS

Las salidas profesionales que tiene el curso son:

Technical digital content managers, AI consultants in tourism, tourism resource management, hotel resource management

To provide attendees with

- an overview of the IT tools and information management services that are required for effective and competitive information management
- a thorough understanding of AI tools, which can be applied to tourism business processes and data.
- An overview of the landscape and possible applications of AI to tourism management.

METODOLOGÍA

This is a theoretical-practical course. The methodology is based on problem-based learning and reverse class. Participants will receive the theoretical bases that will allow them to put them into practice through different techniques, including role-play. In this way, they will be able to solve real situations that may arise when carrying out a correct data analysis. With regard to the online methodology, the contents will be provided through the virtual classroom and will consist of theoretical

units, video viewing and questionnaires to facilitate the study of data analysis.

To assess whether the objectives of the course have been achieved, both theoretical and practical evaluation will be carried out, as well as taking into consideration aspects such as punctuality, attendance and participation in each of the activities proposed. The tests will consist of true/false questionnaires, multiple-choice tests and simulated situations in the UV's IT classroom.