

SUBJECTS DOSSIER - Academic Year 2025-26

First Academic year – 1st Term

PROGRAMMING FUNDAMENTALS I

Professor(s):

Jesús Serrano Guerrero
Email: Jesus.Serrano@uclm.es
Building: Fermín Caballero (ESI) Room: 2.05
Javier Verdugo Lara
Email: Javier.Verdugo@uclm.es
Building: Anexo A Fermín Caballero (ESI) Room: A 1.3

Syllabus:

1. Elements of Programming and Languages
2. Introduction to Programming
3. Structured and modular Programming
4. Data structures
5. Recursion

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42302>

SUBJECTS DOSSIER - Academic Year 2025-26

Physics for Computer Science

Professor(s):

Peter Stephen Normile
Email: Peter.Normile@uclm.es
Building: Fermín Caballero (ESI) Room: 2.02

Syllabus:

1. Electric field and potential
2. Electrostatics in conductors & dielectrics. Capacitors
3. Electric current and direct current (dc) circuits
4. Magnetic field and its source
5. Magnetic properties of materials
6. Electromagnetic induction
7. Alternating current & theory of electric circuits
8. Waves and information transfer
9. Electrical conduction in semiconductors. Semiconductor devices

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42301>

SUBJECTS DOSSIER - Academic Year 2025-26

BUSINESS MANAGEMENT FUNDAMENTALS

Professor(s):

Jesús M^a Díaz de Mera Aranda
Email: jesus.diazdemera@uclm.es
Building: Fermín Caballero (ESI) Room: -

Syllabus:

1. The nature of the company and its environment
2. The strategic management function
3. The finance function
4. The human resources function
5. The production function
6. The marketing function
7. Business management information systems

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/406/42304>

SUBJECTS DOSSIER - Academic Year 2025-26

First Academic year – 2nd Term

ALGEBRA AND DISCRETE MATHEMATICS

Professor(s):

José Ángel Martín Baos
Email: JoseAngel.Martin@uclm.es
Building: Fermín Caballero (ESI) Room: 2.17

Syllabus:

1. Sets, functions and relations
2. Counting
3. Arithmetic
4. Graph theory
5. Introduction to linear algebra

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42305>

SUBJECTS DOSSIER - Academic Year 2025-26

PROGRAMMING FUNDAMENTALS II

Professor(s):

Aurora Vizcaino Barceló
Email: Aurora.Vizcaino@uclm.es
Building: Anexo A Fermín Caballero (ESI) Room: 3.18

Syllabus:

1. Object Oriented Programming. Classes and ObjectsCounting
2. Inheritance and Polymorphism
3. Exceptions
4. Event-driven programming

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42306>

SUBJECTS DOSSIER - Academic Year 2025-26

COMPUTER NETWORKS I

Professor(s):

Fernando Rincón Calle
Email: Fernando.Rincon@uclm.es
Building: Fermín Caballero (ESI) Room: 3.03

Syllabus:

1. Introduction to computer networks
2. Applications and services
3. Transport Layer TCP/IP
4. Network layer
5. IP addressing
6. Routing
7. Data Link
8. Means of data transmisión and communication

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42308>

SUBJECTS DOSSIER - Academic Year 2025-26

Second Academic year – 1st Term

DATA STRUCTURES

Professor(s):

Manuel Ángel Serrano Martín
Email: Manuel.Serrano@uclm.es
Building: Fermín Caballero (ESI) Room: 3.22

Syllabus:

1. General concepts
2. Stacks
3. Queues
4. Lists
5. Graphs
6. Trees

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42312>

SUBJECTS DOSSIER - Academic Year 2025-26

Operating Systems I

Professor(s):

Carlos González Morcillo
Email: carlos.gonzalez@uclm.es
Building: Fermín Caballero (ESI) Room: 0.11

Syllabus:

1. Introduction to Operating Systems
2. File System
3. Process Management
4. Main Memory Management
5. Input/Output Management

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42313>

SUBJECTS DOSSIER - Academic Year 2025-26

Second Academic year – 2nd Term

STATISTICS

Professor(s):

Irene García Camacha Gutiérrez
Email: irene.garciacamacha@uclm.es
Building: Edificio Politécnico Room: C-22, 2nd floor

Syllabus:

1. Introduction to Statistics
2. Descriptive Statistics
3. Probability of Events
4. Random Variables and Probability Distributions
5. Inference Procedures

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42315>

SUBJECTS DOSSIER - Academic Year 2025-26

PROGRAMMING METHODOLOGY

Professor(s):

Jesús Fontecha Diezma
Email: Jesus.Fontecha@uclm.es
Building: Fermín Caballero (ESI) Room: A 1.07

Syllabus:

1. Analysis of algorithms
2. Divide and Conquer
3. Greedy algorithms
4. Backtracking pattern

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42316>

SUBJECTS DOSSIER - Academic Year 2025-26

CONCURRENT AND REAL-TIME PROGRAMMING

Professor(s):

David Vallejo Fernández
Email: David.Vallejo@uclm.es
Building: Fermín Caballero (ESI) Room: 0.10

Syllabus:

1. Basic concepts
2. Semaphores and shared-memory
3. Message passing
4. Other synchronization mechanisms
5. Scheduling in real-time systems
6. Reliability and fault tolerance

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42317>

SUBJECTS DOSSIER - Academic Year 2025-26

DATABASES

Professor(s):

José Antonio Cruz Lemus
Email: JoseAntonio.Cruz@uclm.es
Building: Fermín Caballero (ESI) Room: 2.03

Syllabus:

1. Introduction to Databases
2. Data Models
3. Relational Model
4. Structured Query Language

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42319>

SUBJECTS DOSSIER - Academic Year 2025-26

Third Academic year – 1st Term

COMPUTER ARCHITECTURE

Professor(s):

Fernando Rincón Calle
Email: Fernando.Rincon@uclm.es
Building: Fermín Caballero (ESI) Room: 3.03

Syllabus:

1. Introduction
2. Parallelism and Parallel Architectures
3. Instruction Level Parallelism and Instruction Scheduling
4. Superscalar Processors
5. Multiprocessor Architectures
6. Advanced Architectures

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42302>

SUBJECTS DOSSIER - Academic Year 2025-26

INTELLIGENT SYSTEMS

Professor(s):

Luis Rodríguez Benítez
Email: Luis.rodriguez@uclm.es
Building: Fermín Caballero (ESI) Room: 2.05

Syllabus:

1. Introduction to intelligent agents and systems.
2. Problem solving and search
3. Informed search algorithms
4. Constraint satisfaction problems
5. Adversarial search
6. Reinforcement learning

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42321>

SUBJECTS DOSSIER - Academic Year 2025-26

Software Engineering II

Professor(s):

Ismael Caballero
Email: Ismael.Caballero@uclm.es
Building: Fermín Caballero (ESI) Room: 2.16

Syllabus:

1. Methodologies and Software Development Processes
2. Software Configuration Management
3. Quality of Software Products
4. Verification and Validation of the Software
5. Software Maintenance

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42324>

SUBJECTS DOSSIER - Academic Year 2025-26

Fourth Academic year – 1st Term

Techniques of Automated Learning

Professor(s):

Andrés Montoro Montarroso
Email: Andres.Montoro@uclm.es
Building: Fermín Caballero (ESI) Room: 3.14

Syllabus:

1. Introduction to Machine Learning
2. Supervised learning
3. Unsupervised learning
4. Machine Learning Applications

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42392>

SUBJECTS DOSSIER - Academic Year 2025-26

Fourth Academic year – 2nd Term

INFORMATION SYSTEMS AUDITING

Professor(s):

Ignacio García Rodríguez de Guzmán
Email: Ignacio.GRodriguez@uclm.es
Building: Fermín Caballero (ESI) Room: 3.26

Syllabus:

1. Introduction and basic concepts of information systems auditing
2. Evaluation, internal control and audit methodologies
3. Review areas
4. Legal and regulatory aspects of auditing
5. IT Auditing tools

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42366>

SUBJECTS DOSSIER - Academic Year 2025-26

WEB SYSTEMS DEVELOPMENT

Professor(s):

Manuel Ángel Serrano Martín
Email: Manuel.Serrano@uclm.es
Building: Fermín Caballero (ESI) Room: 3.22

Syllabus:

1. Web architectures and frameworks
2. Web systems development languages
3. Web engineering and development methodologies

Electronic Course Guide

<https://planea.apps.uclm.es/web/guia/407/42386>