

Materia 4_01: Computer Science Fundamentals

Materia:	Fundamental of Computer Science	ECTS:	20
Descriptor	<ul style="list-style-type: none">• Fundamentals of programming languages. Functional Paradigm. Logical Paradigm. Support Technologies and Tools• Data structures. Lineal Structures. Divide and Overcome Strategy. Map and Hash Table. Priority Queue and Binary Mound. Orderer Map and Binary Search Tree. Graphs and Partition Structure• Relational Databases. The SQL language: data manipulation. Database management systems. Relational database design• The software process. Software architecture. Object-oriented Model. Software design. Test		
Objetivos generales	This subject has the objective of offering the basic knowledge of the computer science branch to be able to develop software.		
Competencia específica	CE [4-01]: Analyse, design, build, and maintain applications in a solid, safe, and efficient way, selecting the most suitable programming paradigms and languages.		
Resultados de aprendizaje	<ul style="list-style-type: none">• To analyse, design, build, and maintain applications in a solid, safe, and efficient way, selecting the most suitable programming paradigms and languages.• To know, design, and apply the most suitable data types and structures to solve a particular problem.• To apply the features, functions, and structure of the Data Bases that enable their suitable use, and ability to design, analyse, and implement applications based on them.• To design, develop, select, and evaluate applications and computer systems, assuring their reliability, security, and quality according to ethical codes and the current legislation.		
Métodos de evaluación	<ul style="list-style-type: none">• Evaluation: Written open-ended test and Problems• Assessment instruments: Checklists and Rating Scales		