

#### Materia 4\_04: Support techniques for Data Science

<b>Materia:</b>	Support techniques for Data Science	<b>ECTS:</b>	10
<b>Descriptores</b>	<ul style="list-style-type: none"> <li>• Visualization theory. Principles of design. True representation of information. Visualisation tools. Visualisation of spatial and geospatial data. Visualisation of knowledge. Visualisation of large data sets. Audiovisual and interactive visualisation. Presentations.</li> <li>• Exploitation of data warehouses: OLAP tools and dashboards. Data Warehouse Design. Data Warehouse Maintenance: ETL Tools. NoSQL Systems. Column family systems: Cassandra. Systems oriented to graphs: Neo4j.</li> </ul>		
<b>Objetivos generales</b>	This subject has the objective of introducing the main technique of data management and visualization to support data science analysis.		
<b>Competencia específica</b>	CE [4-04] Design data management systems to support data science and to select suitable visualization to support knowledge and enhance communication for any type of public on relevant issues of a social, scientific, or ethical nature		
<b>Resultados de aprendizaje</b>	<ul style="list-style-type: none"> <li>• Design effective data visualizations to provide new insights into a research question or communicate information to the viewer.</li> <li>• Find and select appropriate data that can be used to create a visualization that answers a particular research question.</li> <li>• Select and use the most appropriate visualization techniques and tools to represent data and results in different contexts.</li> <li>• Handle data and data visualizations in a manner that demonstrates an understanding of ethical considerations surrounding data (including data storage, citation, and protection).</li> <li>• Design and use applications to extract knowledge from different data sources.</li> <li>• Communicate information, ideas, problems and solutions to both specialized and non-specialized audiences.</li> <li>• Design data models and specify information systems requirements to store and process data efficiently.</li> <li>• Design and implement the processes of data acquisition, cleaning, transformation and integration for subsequent analysis.</li> </ul>		
<b>Métodos de evaluación</b>	<ul style="list-style-type: none"> <li>• Evaluation: Written open-ended test and Problems</li> <li>• Assessment instruments: Checklists and Rating Scales</li> </ul>		