Bachelor’s Degree in Data Science

Introduction to the degree

The analysis of various data sets has become a relevant field within the technological and scientific fields. The generation of large volumes of data by today’s society and its storage thanks to the decrease in price of information systems, provides new business opportunities while demanding new professional profiles.

Nowadays, strategic decision making is based on the knowledge extracted from the data, both in business environments and in public administrations. Those professionals trained in Data Science will be able to design data collection in any environment (industrial, sociological, economic, political, business, etc.), they will be able to process, analyse and combine data from different sources, as well as extract knowledge and communicate effectively how to manage such knowledge to facilitate strategic decision making.

International mobility

Data Science students will have a flexibility similar to that of Informatics Engineering when choosing international destinations in which to study for a semester, carry out their final degree project or internships in companies. The School of Informatics has agreements with some of the best European universities and also with universities in the United States, China, Japan and Australia.

Internships

Data Science students complete their training through internships so that they can join the professional world with some technical and human experience. Some of the companies or institutions which accept UPV students for work placement opportunities are: Indra, Bull, British Telecom, Edicom, Iberdrola or the Generalitat Valenciana (Valencia’s Government), in all cases the students receive financial compensation.

Continuation of studies

With this degree, you will be able to access to:

- MD in Information Management
- MD in Software Engineering, Formal Methods and Informations Systems
- MD in Artificial Intelligence, Pattern Recognition and Digital Imaging

and be part of Spain’s best technological university according to the Shanghai ranking

Enjoy our huge campuses with spaces designed for you such as the Student Recreation House.

Professional opportunities

According to several international publications, there is currently a high deficit of data scientists in many sectors such as health, banking, governments (national, regional and local), public administrations, industry, press and retail (offline and online), among many others.

Graduates in data science will be trained to lead data analysis projects whose purpose can be: the improvement of industrial processes, risk analysis, the pre-emption of possible epidemics in certain geographical areas, the analysis of drug resistance of certain bacteria, the reorientation of marketing campaigns thanks to the combination of internal data of the company with information obtained after analysing trends in social networks, the design of new products that cover needs detected in certain niche markets, the study of the evolution of ecosystems and, in general, decision-making roles in any organisation.

You can do up to 70 sports in our facilities.

You will find many services at your disposal: language classes, discounts in public transport, counselling, employability support…
Bachelor's Degree in Data Science

Credits for obtaining the degree

<table>
<thead>
<tr>
<th>Basic courses</th>
<th>Compulsory</th>
<th>Elective</th>
<th>Internship</th>
<th>T.F.G.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>60.00</td>
<td>141.00</td>
<td>27.00</td>
<td>0.00</td>
<td>12.00</td>
<td>240.00</td>
</tr>
</tbody>
</table>

The subjects that you will be able to take

**Basic courses**
- Linear Algebra
- Exploratory Data Analysis
- Mathematical Analysis
- Computers and Operating Systems Fundamentals
- Company Management Fundamentals
- Programming Fundamentals
- Discrete Mathematics
- Statistical Models for Decision Making I
- Statistical Models for Decision Making II
- Programming

**Compulsory courses**
- Data Acquisition and Transfer
- Algorithmic Databases
- Economic and Social Behaviour
- Digital Economy
- Data Structures
- Models Assessment, Deployment and Monitoring
- Data Management
- Project Management Infrastructure for Data Processing
- Natural Language and Information Retrieval
- Professional, Legal and Ethics Framework
- Discrete Modelling and Information Theory
- Continuous Modelling and Simulation
- Descriptive and Predictive Models I
- Descriptive and Predictive Models II
- Optimisation
- Project I, Data Comprehension
- Project II, Data Integration and Preparation
- Project III, Data Analysis of Data
- Representation of Knowledge and Reasoning
- Data Security
- Scalable Techniques in Automatic Learning
- Visualisation

**Elective courses**
- Análisis de Datos en Entornos Industriales
- Análisis de Imágenes y Videos
- Análisis de Mercados y Aplicaciones Financieras
- Análisis de Redes Sociales
- Análítica de Datos en Educación
- Análítica de Datos en Seguridad
- Bases de Datos Avanzadas y Distribuidas
- Biomedical Data Science
- Business Analytics
- Cibermetría
- Estructuras de Datos y Algoritmos Escalables
- Gestión Clínica Y de Servicios de Salud
- Gestión de Datos Científicos en Salud
- Gestión de Datos en Logística y Cadenas de Suministro
- Languages
- Marketing
- Modelos de Programación para Computación de Datos
- Procesamiento y Análisis de Biosecuencias
- Programación para Internet de las Cosas (IoT)
- Sistemas de Información Empresarial
- Sistemas Inteligentes de Transporte
- Técnicas de Previsión
- Tratamiento de Datos Geoespaciales
- Tratamiento de la Información en IoT
- Visualización Interactiva