



1º CICLO | LICENCIATURA

Ciência de Dados

Direction

SILVIA MARIA DIAS PEDRO REBOUÇAS

Access Conditions

Number of Semesters

6

ECTS

120

About

The degree in Data Science aims to train professionals who, combining solid knowledge in the fields of Statistics and Computer Science, will work to promote and use data and modern Statistical and Artificial Intelligence algorithms to support decision making and solve problems in a variety of areas, from science to management and society. The digital transformation has highlighted the importance of Data Science in both the public and private sectors, with more and more data being generated, technological advances that make it possible and more intuitive and efficient to generate knowledge from it, and an increasingly data-driven organizational culture. Professionals graduating from this course will have fundamental analytical and technological skills so that they can be agents of change and digital transformation in companies through Data Science. They will also be prepared for the business environment through Curricular units in the area of Management, including Business Analytics and Tourism Analytics, which are considered to be of great relevance in the current context of economic recovery in Portugal and, in particular, in the Algarve, where tourism plays a prominent role. The course favors a multidisciplinary Challenge Based Learning (CBL) approach, aimed at solving real challenges using data.

Course Plan

Course Structure

1º Ano / No Branch

[Data Science Foundations](#) 6 ECTS | [Exploratory Data Analysis](#) 6 ECTS | [Introduction to Programming](#) 6 ECTS | [Linear Algebra](#) 6 ECTS | [Mathematics I](#) 6 ECTS | [Discrete Mathematics](#) 6 ECTS | [Information Systems](#) 4 ECTS | [Mathematics II](#) 6 ECTS | [Probabilities and Statistics](#) 8 ECTS | [Programming Laboratory](#) 6 ECTS |

2º Ano / No Branch

[Business Management](#) 5 ECTS | [Databases](#) 6 ECTS | [Introduction to Stochastic Processes](#) 6 ECTS | [Multivariate Analysis and Unsupervised Learning](#) 8 ECTS | [Operational Research](#) 5 ECTS | [Big Data storage](#) 6 ECTS | [Business Analytics](#) 6 ECTS | [Project Management](#) 5 ECTS | [Scientific Research Methodologies](#) 5 ECTS | [Supervised Learning](#) 8 ECTS |

3º Ano / No Branch

[Big Data Processing](#) 6 ECTS | [Decision Support Systems](#) 6 ECTS | [Ethics and Data Security](#) 6 ECTS | [Time Series](#) 6 ECTS | [Web Programming](#) 6 ECTS | [Final Course Work](#) 14 ECTS |

[Option](#) 10 ECTS | [Tourism Analytics](#) 6 ECTS |