

COURSE DETAIL

FOUNDATIONS OF DATA SCIENCE

Country

Spain

Host Institution

Carlos III University of Madrid

Program(s)

Data Science and Python in Madrid, Data Science in Madrid

UCEAP Course Level

Lower Division

UCEAP Subject Area(s)

Statistics Computer Science

UCEAP Course Number

10

UCEAP Course Suffix**UCEAP Official Title**

FOUNDATIONS OF DATA SCIENCE

UCEAP Transcript Title

FOUNDATION/DATA SCI

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course explores the foundations of data science from three perspectives: inferential thinking, computational thinking, and real-world relevance. It focuses on critical concepts and skills in computer programming and statistical inference, in conjunction with hands-on analysis of real-world datasets, including economic data, document collections, geographical data, and social networks. This course also delves into social and legal issues surrounding data analysis, including issues of privacy and data ownership.

The curriculum and format are designed specifically for students who have not previously taken statistics or computer science courses. Students with some prior experience in either statistics or computing are welcome to enroll and often find that this course offers a new perspective that blends computational and inferential thinking. Students who have taken several statistics or computer science courses should instead take a more advanced course.

Language(s) of Instruction

English

Host Institution Course Number

Host Institution Course Title

FOUNDATIONS OF DATA SCIENCE

Host Institution Course Details

Host Institution Campus

Host Institution Faculty

Carlos III International School

Host Institution Degree

Host Institution Department

Course Last Reviewed

2026-2027

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