

## COURSE DETAIL

### DATA SCIENCE, BIG DATA AND DATA VARIETY

**Country**

Australia

**Host Institution**

University of Sydney

**Program(s)**

University of Sydney

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Computer Science

**UCEAP Course Number**

120

**UCEAP Course Suffix****UCEAP Official Title**

DATA SCIENCE, BIG DATA AND DATA VARIETY

**UCEAP Transcript Title**

DATA SCI/BIG DATA

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

This course examines the methods and techniques to efficiently explore and analyze large data collections. Students will learn how to ingest, combine and summarize data from a variety of data models which are typically encountered in data science projects, such as relational, semi-structured, time series, geospatial, image, text. As well as reinforcing their programming skills through experience with relevant Python libraries, this course will also introduce students to the concept of declarative data processing with SQL, and to analyze data in relational databases. Students will be given data sets from, eg. , social media, transport, health and social sciences, and be taught basic explorative data analysis and mining techniques in the context of small use cases. The course will further give students an understanding of the challenges involved with analyzing large data volumes, such as the idea to partition and distribute data and computation among multiple computers for processing of 'Big Data'.

### Language(s) of Instruction

English

### Host Institution Course Number

DATA2001

### Host Institution Course Title

DATA SCIENCE, BIG DATA AND DATA VARIETY

### Host Institution Campus

### Host Institution Faculty

### Host Institution Degree

### Host Institution Department

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