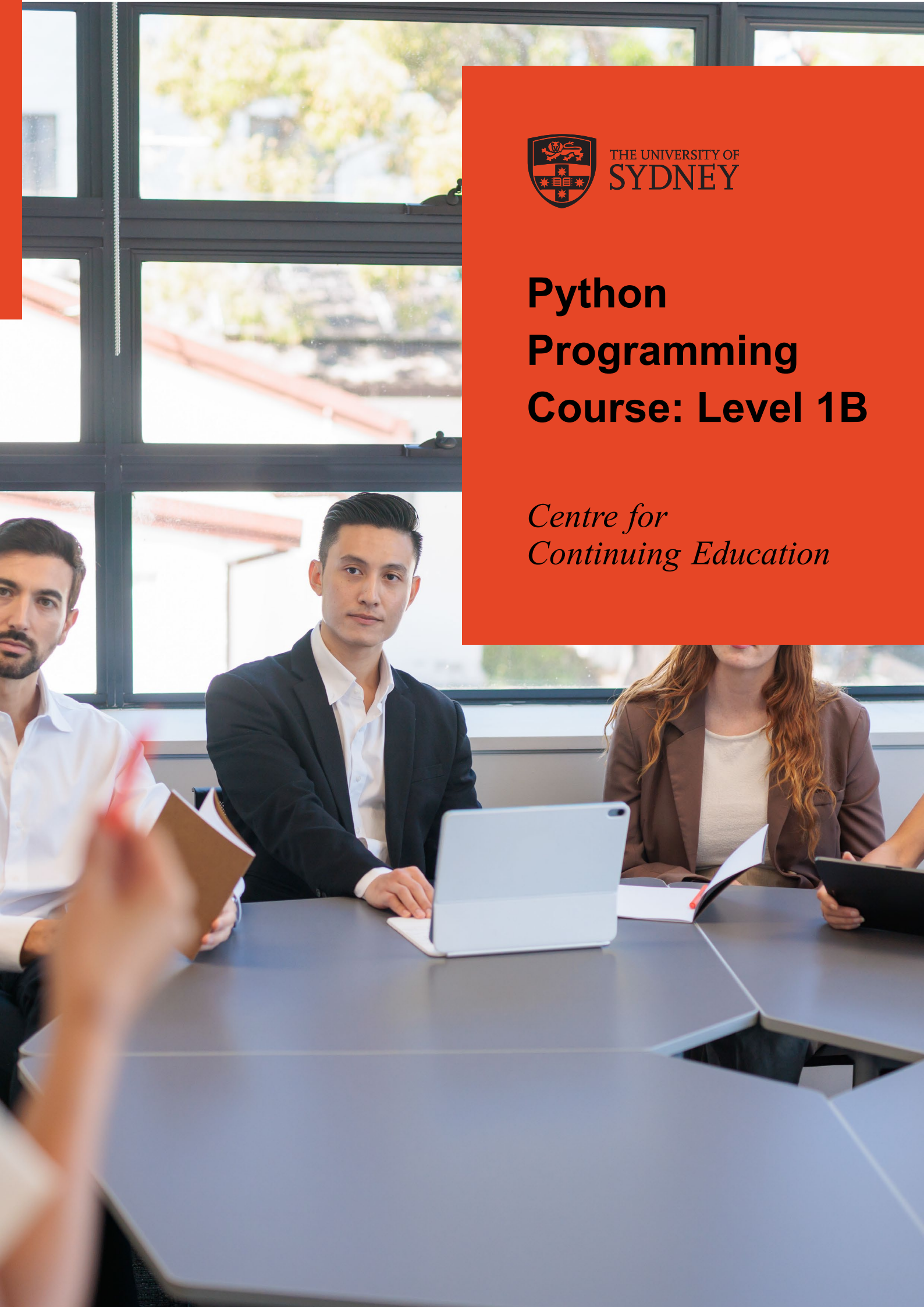THE UNIVERSITY OF
SYDNEY

Python Programming Course: Level 1B

Centre for Continuing Education

Python Programming Course: Level 1B

The ability to extract useful insights from big data is one of the most highly-valued skills in today's knowledge economy. Python's massive library of functions and user-friendly development environments, make it easy to clean, combine, analyse and visualise data from a variety of sources. The creation and distribution of routine reports can be automated, saving valuable work time.

This is a practical 'learning-by-doing' course. With the help of expert guidance and supervision, you will develop your own Python script to automate the management, analysis, visualisation and reporting of a real-world dataset (provided).

This course is part two of a two-part Introduction to Python series. We recommend enrolling in both courses to gain entry level skills. Enrolment in both courses is not compulsory.

Intended audience

Suitable for professionals, students and academics who want to develop more advanced Python skills and get a taste of Python's extensive data analysis and visualisation capabilities.

Before the course

Anaconda Python Version 3.x is required and should be downloaded free of charge from Anaconda before class.

Materials

Training materials, including a mixture of step-by-step instructions, examples and exercises are provided electronically. These materials will serve as a useful reference when working with Python in future.

Course duration
1 session, 8 hours total

Time
9am - 5pm

Format
Face-to-face
or
Online in real-time

Dates
Browse available
course dates

Prerequisites

It is assumed you have computer and data literacy knowledge to the level of performing basic data analysis tasks, i.e., high school algebra, percentages, probability, averages. It is assumed you have completed Python Programming Course: Level 1A or have equivalent knowledge.

Upon completion

Every participant receives a University of Sydney certificate of completion.

Aims

In this course, you will build on the fundamental Python programming skills acquired in the Python Programming Course: Level 1A and learn to apply them to contemporary data analytics: managing and analysing data, and visualising and publishing insights to inform decision-making.

Outcomes

By the end of this course, you should be able to:
– import data from different sources, including files and databases
– manage data using the Python Data Analysis Library (Pandas)
– perform descriptive and predictive analyses
– create basic graphs and visualisations
– automate the creation of routine reports.

Content

– Reading data from files and databases
– Working with Pandas data structures (Series and DataFrames)
– Cleaning, indexing, querying, sorting, aggregating and merging
– Descriptive and predictive data analysis
– Data visualisation
– Automating the creation of Word and PDF reports

"The facilitator showed expert knowledge and instruction. He was responsive to any questions regardless of complexity and freely shared his experiences in real world scenarios."

Joseph Thompson

Organisational training and development

This course can be delivered as a private session for groups, and tailored to meet the needs of your business. Contact us to discuss our range of organisational training solutions.

Learn more

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SYDNEY

We recognise and pay respect to the
Elders and communities – past, present,
and emerging – of the lands that the
University of Sydney's campuses stand
on. For thousands of years they have
shared and exchanged knowledges
across innumerable generations for the
benefit of all.

Empower ambition,
inspire leadership