ES Catapult Python and Data –

Tutor guide

# General delivery plan

This section explains generally how the course can be delivered over five days.

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| **DAY 1 – Python 3** | |
| 09:30 | Introduction – Info on how the course will run |
| DG\_01\_introduction\_to\_python\_3.pptx – Note: No Lab with this unit  DG\_02\_Fundamental\_Variables.pptx |
| 11:00 | *Break* |
| 11:15 | EG\_02\_Fundamental\_Variables.docx – Lab  DG\_03\_Flow\_Control.pptx |
| 12:30 | *Lunch* |
| 13:30 | EG\_03\_Flow\_Control.docx – Lab  DG\_04\_String\_Handling.pptx |
| 15:00 | *Break* |
| 15:15 | EG\_04\_String\_Handling.docx – Lab  Potential challenges from the Challenge Document |
| 16:30 | *Finish* |
| **DAY 2 – Python 3** | |
| 09:30 | Recap and review  DG\_05\_Collections.pptx  EG\_05\_Collections.docx - Labs |
| 11:00 | *Break* |
| 11:15 | DG\_07\_Data\_Storage\_and\_File\_Handling.pptx  EG\_07\_Data\_Storage\_and\_File\_Handling.docx - Lab |
| 12:30 | *Lunch* |
| 13:30 | DG\_08\_Functions.pptx  EG\_08\_Functions.docx - Lab |
| 15:00 | Break |
| 15:15 | DG\_09\_Advanced\_Collections.pptx  EG\_09\_Advanced\_Collections.docx – Lab  Potential challenges from the Challenge Document |
| 16:30 | *Finish* |
| **DAY 3 – Python 3** | |
| 09:30 | Recap and review  DG\_10\_Modules\_and\_Packages.pptx  EG\_10\_Modules\_and\_Packages.docx - Lab |
| 11:00 | *Break* |
| 11:15 | DG\_11\_Classes\_and\_OOP.pptx  EG\_11\_Classes\_and\_OOP.docx - Lab |
| 12:30 | *Lunch* |
| 13:30 | DG\_12\_Error\_Handling\_and\_Exceptions.pptx  EG\_12\_Error\_Handling\_and\_Exceptions.docx - Lab |
| 15:00 | *Break* |
| 15:15 | Potential challenges from the Challenge Document |
| 16:30 | *Finish* |
| **DAY 4 – Data Handling in Python** | |
| 09:30 | Recap on previous days learning  02. Introduction to Python and IDEs.pptx  02. Introduction\_to\_Python\_and\_IDEs\_Exercise.docx - Lab |
| 11:00 | *Break* |
| 11:15 | 04. Mathematical and Statistical Programming with Numpy.pptx  04. Mathematical\_and\_Statistical\_Programming\_with\_Numpy\_Exercise.docx - Lab |
| 12:30 | *Lunch* |
| 13:30 | 05. Introduction to Pandas.pptx  05\_Introduction\_to\_Pandas\_Exercise.docx - Lab |
| 15:00 | *Break* |
| 15:15 | 06. Data Cleaning with Pandas.pptx  06\_Data\_Cleaning\_with\_Pandas\_Exercise.docx - Lab |
| 16:30 | *Finish* |
| **DAY 5 - Data Handling in Python** | |
| 9:30 | Recap on Previous day learning  07. Data Manipulation with Pandas.pptx |
| 11:00 | *Break* |
| 11:15 | 07\_Data\_Manipulation\_with\_Pandas\_Exercise.docx – Lab |
| 12:30 | *Lunch* |
| 13:30 | 08. Methods for Visualising Data.pptx |
| 15:00 | *Break* |
| 15:15 | 09\_Methods\_for\_Visualising\_Data\_Exercise.docx - Lab |
| 16:30 | *Finish* |

# Notes on delivering this course

This course is designed to be as practical as possible. The delegates will not be familiar with Python in a professional sense, but may have history of private learning with the language.

The VM is set up as follows:

Course Files are available on the desktop. Inside the QAZCATAPY folder, the learning is split up into 2 distinct folders. The first for days 1, 2 and 3. The second for days 4 and 5.

Inside each of these folders, the data, exercise guides, starting files and solutions (where appropriate) are available.

For days 1 to 3, Pycharm has been installed for the preferred IDE for python. For days 4 and 5, there are a number of programs installed including RStudio, Anaconda and Jupyter Notebook.

I have created a Repo with all content (presentations, data, guides, labs, solutions, challenges etc) [here](https://github.com/AndySmithQA/Catapult)

The content is also available from Courseware at QA.

It is important to note that the course has been made up of 2 separate QA courses which have had the number of modules reduced to meet the time requirements. Only the content that needs to be delivered has been made available for this course. The timings are not accurate, and full freedom is given to the trainer, with the caveat that all content be covered.