



## Certificate Program in Python for Algorithmic Trading

### Example Study Plan

#### Remarks:

- the table is just an **example** of how the different topics can be combined into a 12-week study program
- week 1 refers to the **starting week of the program**, i.e. to **calendar week 5** from Monday, 29. January 2018
- it assumes an effort of some **10-12 hours per week** for watching the videos, reading the materials and self-study
- the column **Certificate Program** contains the main elements/videos of the program, found under the same name on the Quant Platform and maybe other trainings (such as Finance with Python Videos)
- the column **OSBC** shows the respective session from the Online Summer Bootcamp that covers the topics in a rather concise fashion
- the column **Python for Financial Data Science** refers to the materials for respective class; this will be updated as we go
- the column **Python Infrastructure** refers to resources that cover topics in the context of Linux and Python infrastructure, environments, best practices, etc.; these topics are important for setting up a proper development environment and processes
- the column **Reading Material** refers to the written materials & codes found in the *Finance with Python* and *Python for Algorithmic Trading Courses* as well as in the early draft version of *Python for Finance, 2nd ed.*
- under **Live Sessions** you find the planned live sessions for the respective week; they will be announced by email invitations in general one week before they take place; they cover **selected important topics** or present **new/updated material** not yet available on the Quant Platform
- the single recordings of the **Financial Data Science** class can be watched as desired or if some special topics are of particular interest (eg stochastics with Python)
- on the Quant Platform you also find a training class called **Webinars, Talks & Special Topics** – here, you find already some videos that you can watch if your time allows, such as a recent talk given in London about **Performance Python** or a webinar about **Bitcoin Mining**; we will add more videos here over the course of the program
- if you have **questions**, please use the **User Forum** on the Quant Platform

WEEK	Certificate Program	OSBC	Python for Financial Data Science	Python Infrastructure	Reading Material	Live Sessions
01	Finance with Python 1 Finance with Python 2	Session 1	Data Types & Structures in Python	-	Finance with Python Chs 1-3 Python for Algo Trading Ch 1 Python for Finance Ch 3	30. Jan 2018: Certificate 01. Feb 2018: PYFDS 01
02	Finance with Python 3 Finance with Python 4	-	Numerical Computing w/ NumPy Data Analysis with pandas	Python & Linux Infrastructure (optional: Windows & SSH)	Finance with Python Chs 4-6 Python for Algo Trading Ch 2 Python for Finance Ch 4-5	06., 08. & 09. Feb 2018: PYFDS 02, 03 & 04
03	Financial Data Science 1 OOP – Introduction	-	Object Oriented Programming	-	Python for Algo Trading Ch 3 Python for Algo Trading App Python for Finance Ch 6	15. Feb 2018: PYFDS 05
04	Financial Data Science 2 OOP – Applications	-	Visualization Financial Time Series	Environments & Docker Containers	Python for Algo Trading Ch 3 Python for Finance Chs 7 & 8	23. Feb 2018: PYFDS 06
05	Vectorized Backtesting OOP – Backtesting	Session 1	-	-	Python for Algo Trading Ch 4	-
06	Event-based Backtesting 1 Event-based Backtesting 2	-	Input-Output Operations Performance Python	Python Tool Chain	Python for Algo Trading Ch 6 Python for Finance Chs 9-10	06. & 08. Mar 2018: PYFDS 07 & 08
07	Regression-based Prediction Classification-based Prediction	Session 2	-	-	Python for Algo Trading Ch 5	-
08	<b>Deep Learning-based Prediction</b>	<b>Session 2</b>	<b>Math Tools, Stochastics Statistics</b>	<b>Python Best Practices 1</b>	<b>Python for Algo Trading Ch 5 Python for Finance Chs 11-12</b>	<b>20. &amp; 22. Mar 2018: PYFDS 09 &amp; 10</b>
09	Real-Time Data Handling Streaming Visualization	Session 3	tba	-	Python for Algo Trading Ch 7	tba
10	Eikon & Oanda	Session 4	tba	Python Best Practices 2	Python for Algo Trading Ch 8	tba
11	Interactive Brokers Gemini	Session 5	tba	-	Python for Algo Trading Chs 9-10	tba

<b>WEEK</b>	<b>Certificate Program</b>	<b>OSBC</b>	<b>Python for Financial Data Science</b>	<b>Python Infrastructure</b>	<b>Reading Material</b>	<b>Live Sessions</b>
<b>12</b>	Automation	Session 6	tba	-	Python for Algo Trading Ch 11	tba
<b>13</b>	<b>Backtesting Competition</b>					
<b>14-16</b>	<b>Final Project Preparation   Live Trading Competition</b>					