



## 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 structured study program plus practice modules
- week 1 refers to the **starting week of the program**, i.e. to **calendar week 36 from Monday, 03. September 2018**
- it assumes an effort of about **10-15 hours per week** for live sessions, watching videos, reading documentation and self-study; some invest a bit more
- 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 **Python for Financial Data Science** refers to the materials for respective class
- the column **Tools & Skills** refers to topics related to basic tools and skills needed in software and Python development for finance and algorithmic trading; these topics are important for setting up a proper development environment and efficient development 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 in the week before they take place); they cover **selected important topics** or present **new/updated material** not yet available on the Quant Platform
- the column **Optional Resources** lists videos, e.g. from the classes **Python for Databases** or **Online Summer Bootcamp**, that can be watched to review or to go deeper into certain topics; they might also present topics from a different angle or with different twists
- on the Quant Platform you also find a training class called **Webinars, Talks & Special Topics** – here you find a collection of recordings from recent talks, webinars and workshops that are related to Python for Finance & Algorithmic Trading
- if you have **technical or content questions**, please use the **User Forum** on the Quant Platform
- if you have **organizational questions**, you can send us an email to [training@tpq.io](mailto:training@tpq.io)

WEEK	Certificate Program	Python for Financial Data Science	Tools & Skills	Reading Material	Live Sessions	Optional Resources
01	Finance with Python 1 Finance with Python 2	Data Types & Structures 01	Tools & Skills 01 (Python Installation, Python Environments)	Finance with Python Chs 1-3 Python for Algo Trading Ch 1 Python for Finance Chs 1-2	Introduction & Overview Session on 03. September 2018 Q&A Session on 07. September 2018	OSCB Session 1
02	Finance with Python 3 Finance with Python 4	Data Types & Structures 02	Tools & Skills 02 (Docker Usage, Jupyter)	Finance with Python Chs 4-6 Python for Algo Trading Ch 2 Python for Finance Ch 3	Python for Excel 01 on 10. September 2018	Python & Linux Infrastructure Windows & SSH
03	Financial Data Science 1 OOP – Introduction	Numerical Computing with NumPy	Tools & Skills 03 (Cloud Usage , Hosted Jupyter)	Python for Algo Trading Ch 3 Python for Algo Trading App Python for Finance Ch 4	[Yves @ ODSC London]	Environments & Docker Containers
04	Financial Data Science 2 OOP – Applications	Data Analysis with pandas	-	Python for Algo Trading Ch 3 Python for Finance Ch 5	Python for Excel 02 on 25. Sep 2018 Q&A Session on 28. Sep 2018	ODSC London Recording
05	Vectorized Backtesting OOP – Backtesting	Object Oriented Programming	Tools & Skills 04 (Vim Code Editor)	Python for Algo Trading Ch 4 Python for Finance Ch 6	Python for Excel 03 on 03. Oct 2018 The AI Machine on 04. Oct 2018	PYDB 01 OSBC Session 1
06	Event-based Backtesting 1 Event-based Backtesting 2	Visualization & Financial Time Series	Tools & Skills 05 (Screen + Vim + q)	Python for Algo Trading Ch 6 Python for Finance Chs 7-8	Python for Excel 04 on 10. Oct 2018	PYDB 02 Python Tool Chain
07	Regression-based Prediction Classification-based Prediction	Input-Output Operations	Tools & Skills 06 (Doctest & Unittest)	Python for Algo Trading Ch 5 Python for Finance Ch 9	Review of Backtesting Techniques 01 on 17. October 2018	PYDB 03 OSBC Session 2
08	Deep Learning-based Prediction	Performance Python	Tools & Skills 07 (Git Version Control)	Python for Algo Trading Ch 5 Python for Finance Ch 10	-	PYDB 04 OSBC Session 2
09	Real-Time Data Handling Streaming Visualization	Math Tools & Stochastics	Tools & Skills 08 (Python Packaging)	Python for Algo Trading Ch 7 Python for Finance Chs 11-12	Review of Backtesting Techniques 02 on 30. October 2018	PYDB 05 OSCB Session 3
10	Eikon & Oanda FXCM Trading Platform	Statistics Dates & Times	Tools & Skills 09 (Documentation)	Python for Algo Trading Chs 8-9 Python for Finance Ch 13 & App	Natural Language Processing 01 on 08. November 2018	PYDB 06 OSBC Session 4
11	Interactive Brokers Gemini	Machine Learning Basics	Tools & Skills 10 (Code Hosting/Case)	Python for Algo Trading Chs 10-11 Python for Finance Ch 13	[Yves @ FPQ & QI London]	OSBC Session 5
12	<b>Automation Review and Case Study 1 Review and Case Study 2</b>	-	-	<b>Python for Algo Trading Ch 12</b>	<b>Natural Language Processing 02 on 23. November 2018</b>	<b>OSBC Session 6 Recordings: ODSC &amp; Quant Insights</b>

<b>WEEK</b>	<b>Certificate Program</b>	<b>Python for Financial Data Science</b>	<b>Tools &amp; Skills</b>	<b>Reading Material</b>	<b>Live Sessions</b>	<b>Optional Resources</b>
<b>13</b>	Backtesting & 1 Day Live Trading Practice Module					
<b>14</b>	1 Week Live Trading Practice Module					
<b>15-16</b>	Final Project Preparation					