

BootUP

FOUNDATION COURSE PROGRAM

CURRICULUM



Data Science

You should be familiar with basic scripting or programming, and basic statistics. Familiarity with R is a plus. Familiarity with RStudio is a plus. We will teach you how to start with R and RStudio, but you have to install them on your computer prior to starting this course. You will need to be comfortable with basic computer skills, such as managing files, running programs, and using a web browser to navigate the Internet. You will need to be self-driven and genuinely interested in the subject. No matter how well structured the program is, any attempt to learn programming will involve many hours of studying, practice, and experimentation. This requires some tenacity, and it is especially difficult to do if you don't find the subject interesting or aren't willing to play around and tinker with your code —so drive, curiosity, and an adventurous attitude are highly recommended!

Educational Objective

This introductory Foundation program teaches the foundational skills all programmers use with Python language, whether they program mobile apps, create web pages, or analyze data. It is ideal for beginners who want to learn new skills, make informed choices about career goals, and set themselves up for success in career-track Foundation programs.

Length of Program*	: 6 Hours
Textbooks required	: None
Instructional Tools Available	: Video Lectures, Practice Assignment, Student and Mentorship Group Chat, Q&A Consultation

Our Instructor



We leverage the talent of the world's top 1% of developers who are experienced in cutting-edge technologies, and source the right talent for corporates and help countries up-level their skill base.

What You Will Learn

- ✔ Basic Notebook commands, Variables, lists, dictionaries, sets, classes in Python, Mathematical functions in Numpy.
- ✔ Start and execute the steps of a data science project, from project definition to model evaluation.
- ✔ Use machine learning techniques to build effective predictive models.
- ✔ Understand Data Science to Be a More Effective Data Analyst
Understand how to create your own Python programs.
- ✔ Use the R Programming Language to execute data science projects and become a data scientist. Implement business solutions, using machine learning and predictive analytics.

*The length is an estimation of total hours the average student may take to complete all required coursework, including lecture and project time. Actual hours may vary.

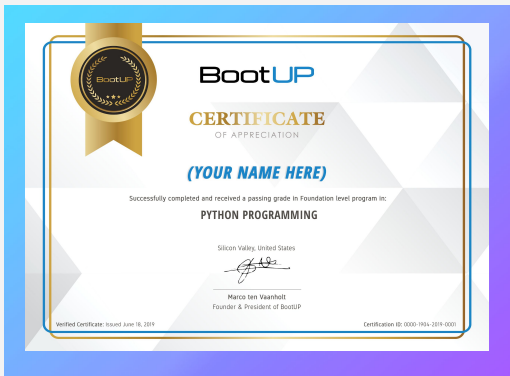
The Benefits of Further Education

A **Foundation Program** from BootUP could be ideal for anyone looking to:

- Pursue promotion in their current line of work
- Explore an entirely new career path in Technology Industry
- Brush up on existing knowledge, skills and professional traits
- Pave the way of further studies at a much higher level
- Start your own business from scratch or setup as a freelancer

The right qualification has the potential to transform your career prospects and education alike. BootUP believes that this learning should be open to anyone with an interest in improving their prospects.

Our Certification



BootUP is proud to offer you the credible and respected learning certification with World-Class Experts around the world through our **Foundation, Flex and Full-Immersive Course Program**.

With a very affordable cost and no entry requirements whatsoever, anyone interested in further education has the incredible chance to study and get the World-Class certification.

Certification Requirement

There are tests throughout the modules. Each module contains exercises and scenarios for students to answer and self-assess their learning. Students are required to complete all content elements in each course and earn at least a 80% average test score on to earn their certificate. Students will have unlimited attempts at all graded tests.

Enrol Today

We make enrolment as quick and easy as possible. Simply pay a visit to our program page, or get in touch with our admissions team at any time for more information. Enrolment is open throughout the year and there are no deadlines or time restrictions. Study in your own time and at your own pace, with helpful advice from our team whenever you need us.

Ask Our Team

For more information on any of our program courses or to discuss enrolment, get in touch with the BootUP team today on **Call or WhatsApp at (+62)-811-992-1500**, or drop us an **email anytime at info@bootup.ai**.

MODULE 1

DATA SCIENCE OVERVIEW

NO	TOPICS	DURATION (in minutes)
1.1.	Data Mining Introduction	TBC
1.2.	Examples of Data Science	TBC
1.3.	Python for Data Science	TBC
Total Online Learning in Minutes		TBC

**Please be advised that the time flow breakdown provided in the table is only an estimate.*

MODULE 2

DATA ANALYTICS OVERVIEW

NO	TOPICS	DURATION (in minutes)
2.1.	Introduction to Data Visualization	TBC
2.2.	Processes in Data Science	TBC
2.3.	Data Wrangling, Data Exploration, and Model Selection	TBC
2.4.	Exploratory Data Analysis or EDA	TBC
2.5.	Data Visualization	TBC
2.6.	Plotting	TBC
2.7.	Hypothesis Building and Testing	TBC
Total Online Learning in Minutes		TBC

**Please be advised that the time flow breakdown provided in the table is only an estimate.*

MODULE 3

INTRODUCTION TO PYTHON PROGRAMMING (BASIC INTRODUCTION)

NO	TOPICS	DURATION (in minutes)
3.1.	What is Python?	TBC
3.2.	Installing Anaconda	TBC
3.3.	Understanding the Spyder Integrated Development Environment (IDE)	TBC
3.4.	Python basics and string manipulation, lists, tuples, dictionaries, variables	TBC
3.5.	Control Structure - If loop, for loop and while Loop	TBC
3.6.	Single line loops	TBC
3.7.	Writing user defined functions	TBC
3.8.	Object oriented programming	TBC
3.9.	Working with Class & Inheritance	TBC
Total Online Learning in Minutes		TBC

**Please be advised that the time flow breakdown provided in the table is only an estimate.*

MODULE 4

STATISTIC FOR DATA

NO	TOPICS	DURATION (in minutes)
4.1.	Measure of Central Tendency - Mean, Mode and Median	TBC
4.2.	Grouped and Ungrouped Data	TBC
4.3.	Measure of Spread - IQR, Variance and Standard Deviation	TBC
4.4.	Covariance	TBC
4.5.	Correlation	TBC
4.6.	Kurtosis, Skewness	TBC
Total Online Learning in Minutes		TBC

**Please be advised that the time flow breakdown provided in the table is only an estimate.*

MODULE 5

DATA STRUCTURE & DATA MANIPULATION IN PYTHON

NO	TOPICS	DURATION (in minutes)
5.1.	Intro to Numpy Arrays	TBC
5.2.	Creating ndarrays	TBC
5.3.	Indexing	TBC
5.4.	Data Processing using Arrays	TBC
5.5.	Mathematical computing basics	TBC
5.6.	Basic Statistics	TBC
5.7.	File Input and Output	TBC
5.8.	Getting Started with Pandas	TBC
5.9.	Data Acquisition (Import & Export)	TBC
5.10.	Indexing	TBC
5.11.	Selection and Filtering	TBC
5.12.	Sorting & Summarizing	TBC
5.13.	Descriptive Statistics	TBC
5.14.	Combining and Merging Data Frames	TBC
5.15.	Removing Duplicates	TBC
5.16.	String Manipulation	TBC
5.17.	Creating Line Plots, Bar Charts, Pie Charts, Histograms, Scatter Plots	TBC
5.18.	Basic Plots, color palettes	TBC
5.19.	Plotitng categorical data	TBC
5.20.	Visualizing lnear relattionship	TBC
Total Online Learning in Minutes		TBC

BootUP

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WITH WORLD-CLASS EXPERTS

Discover your potential NOW.

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For more information about courses,
and to join our complete programs, visit www.bootup.ai

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