Data Science Essentials

The demand for data science talent is growing enormously. If you are working as a business professional and you are ambitious to dive into data science, this hands-on course might be your stepping stone towards becoming a starting data scientist.

This 8-day course will be lectured by university lecturers and experts from practice. The experts have been conducting data science projects for multiple years and have a wide range of practical experiences. They will share their best practices with you and warn you about the pitfalls of data science projects.

The goal of the course is to teach participants the practical and hands-on skills to conduct data science projects. We mainly focus on the practical and 'hard' skills like programming, statistics and machine learning, but will pay attention to the necessary soft skills as well. You will learn the key concepts for working with data and analytics techniques and grow the skills to efficiently run data science projects to answer the key questions of your business.

Course outline

- **Day 1.** Introduction to Data Science & Python programming
- **Day 2.** Statistics for data science
- **Day 3.** Data preprocessing, exploratory data analysis & visualisation
- **Day 4.** Determining the right business question & running data science projects
- **Day 5.** Machine learning
- **Day 6.** Model performance, selection and tuning
- **Day 7.** Prescriptive analytics, operations research and optimisation
- **Day 8.** Hackathon: show off your skills!

The Best of Theory

Theoretical course content is partly based on the education programs and research of the University of Amsterdam and Amsterdam Data Science. Theoretical content is enriched with practical experience and cutting-edge research of ORTEC.

The Best of Practice

Pragmatic application of theory in practice is offered by ORTEC, building upon their decades of experience in data science and mathematical optimization.

"I need practical skills that put me a step ahead of the rest.
I understand that analytics are the future, and Data Science Essentials gives me
the skills in modern data analytics to start putting it in practice."

Facts & Figures

Dates	Thursday 7 and Friday 8 November 2019 Thursday 5 and Friday 6 December 2019 Thursday 30 and Friday 31 January 2020 Thursday 5 and Friday 6 March 2020
Schedule	9:00 - 17:00
Location	Amsterdam Business School
Fee	€ 6,500 (fee is VAT-free) UvA alumni receive 10% discount.
Language	English
PE-Hours	56

How will this course benefit your career?

- You can apply data science to tackle business questions.
- You will gain the ability to quickly get insights in your data.
- You will learn how to clean and preprocess data for subsequent analyses.
- You will be able to conduct statistically valid analyses.
- You will learn how to effectively visualise data with the latest tooling.
- You will know how to build advanced predictive models to optimise your business processes.
- You can apply all of the above with the leading open-source data science programming language: Python.

Hackathon

On the last day of the course we organise a hackathon, in which participants can showcase their freshly acquired skills. We share a business case and dataset, and challenge the participants to go through all stages of a data science project.

Certification

After completion of the course you will receive a Certificate of Attendance of the University of Amsterdam. For accountants, controllers and auditors, the course will provide 56 PE-hours.

Participant profile and entry requirements

This course is for business professionals who perform analyses of any form on data on a daily basis. The content is especially tailored to people who seek to get more from their data. A technical background or profound affinity is a prerequisite, since you will be learning a programming language and will be developing competences in advanced statistics. If you are not sure if your background fits the course, please contact us via info@theanalyticsacademy.com.

Relevant industries

Basically all industries that want to get more value and insights from their data. Including but not limited to: Banks, Insurance Firms, Financial Institutions, Tax, Institutional Investors, Accountancy, Auditing, Consultancy, Services, Government, Energy, Telecom, IT, Internet, Marketing and Communication, Event Management, Logistics, Retail, Trade, Consumer Products, Freight, Healthcare and Pharmaceutical.

Relevant job titles: Engineer, Auditor, Controller, Information Manager, Project Manager, Operations Manager, IT-architect, Digital Marketeer, Data Analyst, Product Developer, IT Process Manager, Risk Manager, Business Analyst, Business Information Analyst, Market Researcher, Manager Customer Intelligence, Business Intelligence Specialist, Consultant or Analyst, Quantitative Analyst, Operations Analyst, Supply Chain Analyst, Marketing Analyst, Database Marketeer, Engineers, Reporting Analyst, Online Marketeer, Sales Analyst, Planner and Process Analyst.

Registration

You can register for this course via:
theanalyticsacademy.com/events/data-science-essentials.
You will be asked to bring your own laptop, since the course is very hands-on. Approximately 50% of the time you will be making exercises or programming, applying the theoretical contents in a practical manner.

Furthermore you'll be challenged to apply the gained theory and skills on your own company cases and data, during the periods in between the lecture days.

Contact

If you have any questions regarding this course or if you are not sure if your background fits the course, please contact:
Susan Nuijten
Manager Executive Education
info@theanalyticsacademy.com
T   +31 (0)20 525 6134

About The Analytics Academy

The Analytics Academy helps organizations to build data science capability at each stage of the data driven transformation.
For every business role - from top management to hands-on analyst - and domain - from customer service to finance.

A cooperation between

UNIVERSITY OF AMSTERDAM
Amsterdam Business School

UNIVERSITY OF AMSTERDAM

Amsterdam Data Science

ORTEC