



Advanced Program in Data Analytics





INDEX

| | |
|---|----|
| ABOUT EXEED ECX | 03 |
| ABOUT ACACIA UNIVERSITY | 04 |
| ADVANCED PROGRAM IN DATA ANALYTICS | 05 |
| PROGRAM STRUCTURE | 06 |
| TRAINING KEY FEATURES | 09 |
| ELIGIBILITY & PREREQUISITES | 09 |
| TOOLS/Frameworks/LIBRARIES | 10 |
| APPLICATION & USE CASES | 10 |
| CAPSTONE PROJECTS & INTERNSHIP/PROJECTS | 11 |
| PLACEMENT SUPPORT & CERTIFICATION | 12 |



ABOUT EXEED ECX



Exeed ECX is a spin-off of Exeed College - a prestigious entity of higher learning and executive education from Westford Education Group. Exeed ECX provides a unique learning method through its satellite centres via blended learning.

Exeed ECX, with its world-class academics, has accreditation and partnerships with the world's premium universities and awarding bodies. Plymouth Marjon University is a top-ranked, accredited university in the UK that collaborated with Exeed ECX. Other major universities collaborating with Exeed ECX are Universidad Católica de Murcia (UCAM) in Spain, Acacia University in the USA, and GEX Business School in France.

Apart from this, our parent organisation Exeed College has tie-ups with universities across the globe – UCAM (Spain), Liverpool John Moores University (UK) and Carolina University (US) as well as with professional accreditation bodies like Scottish Qualifications Authority (SQA), Chartered Management Institute (CMI), Society for Human Resource Management (SHRM) and Cambridge International Qualification to provide globally recognised qualifications

About

Acacia University



Acacia University, located in Arizona, United States, has been a pioneer and leader in distance education since 2000. Stands as a symbol of regeneration, perseverance, and integrity, it aims to provide accessible, quality education to a multi-cultural, global learning community through online/distance learning.

As technology advances and students look for greater flexibility and accessibility with education, it is on a mission to make learning a long-lasting, invigorating experience. It offers academic programs at the bachelor's, master's, doctorate or certificate levels in a multitude of areas.

At Acacia, we are committed to provide unparalleled standards of learning by delivering the highest quality educational programs through smart, innovative forms of learning.

Acacia University Professional Development Programs—a division of Acacia University, USA, provide rigorous online programs to distance learners, working professionals, college students, and those with an insatiable thirst for knowledge.



Airtics Education's Mastering Programs are offered as part of Acacia University Professional Development Programs, and the learners are certified by the University.

THE “
FUTURE
IS YOURS





ADVANCED PROGRAM IN **DATA ANALYTICS**

Overview

An Advanced Program in Data Analytics provides the breadth and depth of experiences to enable you to succeed in a data-driven business world. Combining big data analytics, statistical learning and data visualization with real business case studies, this 6-month program will help you apply the latest analytic techniques in an expanding job market.

Course Duration: **6 Months** | Course Modules: **3 Modules**

PROGRAM STRUCTURE

Module 1

HANDS-ON CORE PYTHON AND PYTHON LIBRARIES FOR DATA

30 HOURS

| PYTHON BASICS | PYTHON LIBRARIES |
|---------------------------|------------------|
| ▲ Variable and data types | ▲ Numpy |
| ▲ Conditional statements | ▲ Pandas |
| ▲ Loops | ▲ Matplotlib |
| ▲ Functions | |

Learning Outcomes

- LO1:** Learning python structure and how to write programs in it
- LO2:** Basic concepts of Python, its syntax, functions, and conditional statements
- LO3:** Acquire the prerequisite Python skills to move into specific branches - Machine Learning, & Data Science
- LO4:** Understand packages to enable them to write scripts for data manipulation and analysis

Module 2

MATHEMATICS & STATISTICS FOR DATA TREATMENT

10 HOURS

| LINEAR ALGEBRA | DATA PRE-PROCESSING |
|----------------|---------------------|
| PROBABILITY | STATISTICAL TOOLS |
| STATISTICS | ▲ CSV |
| DATA CLEANING | ▲ Excel |

Learning Outcomes

- LO1:** Introduce statistical tools for working with datasets
- LO2:** Learn the essentials of probability and statistics for data analysis & visualization
- LO3:** Know how to import and clean data using libraries like NumPy and Pandas for data exploration and analysis
- LO4:** Learning to fix incorrect, corrupted, incorrectly formatted, duplicate, or incomplete data within a dataset

Module 3

DATA VISUALIZATION & DATABASE MANAGEMENT (SQL) 20 HOURS

| | |
|---------------------------------|-------------------|
| DATA VISUALIZATION INTRODUCTION | SQL AND DATABASES |
| TYPES OF CHARTS | SQL COMMANDS |

Learning Outcomes

- LO1:** Acquire a fundamental understanding of the analytical techniques and software tools necessary to effectively generate useful information from structured and unstructured datasets of any size
CHARTS
- LO2:** Gain experience in using the tools and techniques of data science to structure and complete projects focused on obtaining actionable insights from complex data
- LO3:** Dive deeply into a chosen area of practice to fully prepare to use the knowledge gained in the program to add significant value in a professional setting

LO4: Be able to utilize knowledge and skills to continue learning and adapting to new data science technologies

Specialization Module 1

EXPLORATORY DATA ANALYSIS

20 HOURS

| | |
|--------------------------------------|--|
| PATTERN DISCOVERY | LINEAR AND NON-LINEAR MODELS |
| DATA ACQUISITION | CLUSTERING & CLASSIFICATION |
| DATA PREPROCESSING TECHNIQUES | GRAPHICAL VISUALIZATION |
| DIMENSIONALITY REDUCTION | |

Learning Outcomes

- LO1:** Introduction to Exploratory Data Analysis and Visualization
- LO2:** Learn how to analyse exploratory data with the most suitable techniques
- LO3:** Analyse and map the underlying structures of the data
- LO4:** Analyze data for anomalies and missing information
- LO5:** Communicate and analyse data visually using visualization techniques

Project/Internship

CAPSTONE PROJECT

40 HOURS

TRAINING KEY FEATURES



80 hours of live instructor led training



3 industry-based projects, 12 Assignments
& 6 Case Studies



24/7 support and LMS Access



Hands on experience with latest tools & applied projects



Live engagement classes by seasoned academics and professionals



Internship and placement



3 guaranteed interviews by Airtics



Flexible timing for working professionals

ELIGIBILITY

Best suited for those passionate about starting a career in Data Analysis. Special interest in math, statistics, or computer science will certainly stand learners in good stead. But none of these is a prerequisite.

PREREQUISITES

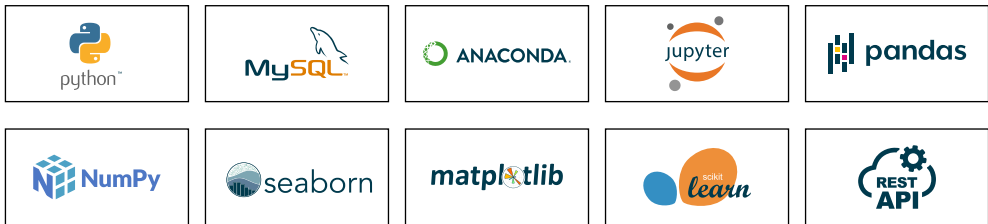
General Requirements:

- No prior experience is required!
- Basic computer skills like managing files, navigating the Internet, and running programs will be useful.
- We'll teach you everything you need to know, but the difficulty level of the projects may vary based on your familiarity with some of the content that is covered.
- Successful completion of this program requires a commitment to stay on pace, complete projects, and finish the program within 3 months. See more details in the program FAQ.

Hardware Requirements: Computer running OS X or Windows

TOOLS/FRAMEWORKS/LIBRARIES

- **Scripting tools:** Python Programming, SQL
- **Data science environment:** Anaconda
- **IDE shell:** Jupyter notebook
- **Data Analytics Libraries:** Pandas, NumPy, seaborn, matplotlib, scikit
- **Database Integrations:** REST API
- **Automated Machine Learning Models:** Supervised, Unsupervised



APPLICATION & USE CASES



Logistics
& Delivery



Web Search
or Internet
Web results



Customer
segmentation



Personalised
Marketing

CAPSTONE PROJECTS

Suggested project topics:



INSURANCE
PRICING
FORECAST



STORE SALES
FORECASTING



AIRLINE DATASET
ANALYSIS & PREDICTING
FLIGHT DELAYS

INTERNSHIP/PROJECTS

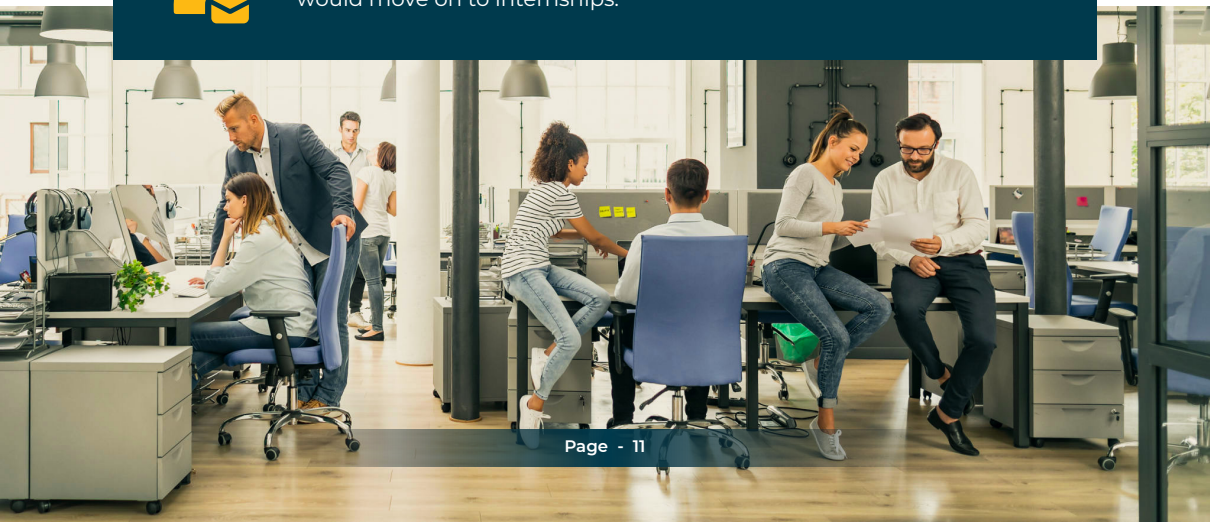
Airtics provides internships in the respective field for a period of 2-3 months to all eligible and able students.

IIINTERNSHIP/PROJECT INCLUDES:

- ✓ Mentoring by software developers
- ✓ Internship certificate
- ✓ Live workshops on projects
- ✓ Candidate's evaluation



After successfully completing the learning modules, eligible students would move on to internships.





PLACEMENT SUPPORT

Airtics's high level of instruction has attracted an increasing number of companies, and the placement scene is expanding. Candidates who excel in internship will be eligible for placement at top MNC's that work with Airtics.

- ✓ Deliver five proof-of- concept a month
- ✓ We will have our partner companies review the POCs
- ✓ 3 guaranteed interviews
- ✓ JD based Support training
- ✓ Placement in MNC

CERTIFICATION



International Certification by

Acacia University - Professional Development







Regional office:
City Center Complex, Pattambi Road, Perinthalmanna,
Malappuram, Kerala, India 679322

Corporate office:
Suite 703, City Gate Tower, Al Ittihad Road, Al Tawun, Sharjah, UAE