YEAR 3	
Courses	**Number of credits**
Calculus III	6
Data Structures and Algorithms	4
R Programming for Data Science	4
Matrix Computations	6
Statistics for Data Science	6
Introduction to Machine Learning	4
Artificial Intelligence	6
Data Visualization	6
Internship I	3
Statistical Analysis of Data	6
Data Engineering Fundamentals	3
Open Elective Course III	3
Professional English	3
Total Year 3	**60**

YEAR 4	
Courses	**Number of credits**
Data Mining	6
Introduction to Big Data	6
Web Application	6
Machine Learning	6
Financial Data Science	6
Deep Learning	6
Internship II	3
Marketing Data Science	5
Natural Language Processing	6
Cybersecurity	4
Project Management	6
Total Year 4	**60**

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Introduction

The Bachelor in Data Science is designed at the interface between mathematics and computer science. The program covers all these areas: programming and data analysis for managing and engineering big data and mathematical tools such as probability and statistics to analyze and interpret data. Moreover, it provides courses on artificial intelligence and machine learning to extract insights from data and support decision-makers.
By offering a comprehensive curriculum that combines cutting-edge technology, data-driven decision-making, and ethical practices, the program prepares the students to become industry leaders who drive innovation, efficiency, and sustainability.

What does a data scientist do?
The work of a data scientist combines statistical analysis, mathematical calculations and computer algorithms to process data and to extract meaningful insights out of them. A Data Scientist can give advice and establish strategies for companies to meet the needs of the customers.
Since its creation, the job of a Data Scientist has always been ranked among the top 3 jobs around the globe. The demand on Data Scientists is growing fast and the job offers great opportunities.

Objectives

- Apply various mathematical techniques for processing problems related to massive quantities of data.
- Write computer programs in languages suitable for data science to collect, clean, and analyze data.
- Communicate the results of data analysis in oral, written, and visual form to both technical and non-technical audiences.
- Advocate for ethical decisions in the use of data.

Admission Requirements

- Completion of secondary education with a final grade of 70% in Mathematics (or equivalent) and 80% in English (or equivalent).
- American, British, and International curriculum students are exempted from the English language requirement.
- Interview with the Head of program.
- Candidates who do not satisfy the above-mentioned requirements can be admitted on a conditional basis.

Programme Structure

YEAR 1	
Courses	**Number of credits**
Elementary Mathematics I	6
Computer Programming I	6
Descriptive Statistics	4
Introduction to Data Science	3
Science, Society and Sustainability	5
Emirati Studies	6
Elementary Mathematics II	6
Computer Programming II	6
Data Tools and Preparation	4
Introduction to Business Analytics	3
English Language	5
Introduction to French Language	3
Open Elective Course I	3
Total Year 1	**60**

YEAR 2	
Courses	**Number of credits**
Calculus I	6
Internet Programming	5
Discrete Mathematics	5
Foundations of Data Science	5
Data Protection	3
Ethics for Data Science	3
Open Elective Course II	3
Applied Linear Algebra	6
Calculus II	6
Probability for Data Science	6
Relational Databases	6
C++ Programming	6
Total Year 2	**60**