

CK411

DURATION 4 Years

MINIMUM CAO POINTS REQUIRED 2020 509

CAO POINTS RANGE 2020 509-625

AVAILABLE PLACES 30

LEAVING CERTIFICATE ENTRY REQUIREMENTS

Minimum grade H5 in two subjects and minimum grade O6/H7 in four other subjects. Subjects must include Irish, English and Mathematics and three other subjects recognised for entry purposes.

ADDITIONAL REQUIREMENT
H3 in Mathematics.

MATURE STUDENT PLACES 3

QQI/FE STUDENT PLACES N/A

INTERNATIONAL STUDENTS

 www.ucc.ie/ugi

QQI/FE STUDENTS

 www.ucc.ie/qqi/stem

COURSE PAGE ONLINE

 www.ucc.ie/en/ck411

CONTACT INFORMATION

Professor Gregory Provan

Dr Michael Cronin

 bsc_dsacoordinator@cs.ucc.ie

 www.ucc.ie/en/compsci

DATA SCIENCE AND ANALYTICS BSc (Honours)

WHAT IS DATA SCIENCE AND ANALYTICS?

Data analytics enables people to make sense out of the huge volumes of data (big data) that confront us in today's world. Expertise in data science and analytics involves storing and manipulating relevant data, and then analysing this data to extract the most salient information necessary for decision-making. Our course focuses on new ways to capture and understand data from the world around us. Being able to extract the most relevant information from data helps us make better decisions for people, communities, industry and society as a whole.

WHY UCC?

The BSc in Data Science and Analytics at UCC is one of few such programmes being offered in Ireland today. Our course will provide you with an education in data storage, manipulation and interpretation, using mathematical sciences and computational methods which will assist you to solve complex real-world problems. Since data science is an emerging field, with only a limited number of degree programmes available, on graduation you will be able to fulfil the increasing demand for these specialist skills.



UCC has a track record in data analytic education and research through its already successful MSc Data Science and Analytics programme, and its leading role in the Science Foundation Ireland (SFI) Insight Centre for Data Analytics. Insight is a joint initiative between researchers at UCC, UCD, NUI Galway, DCU, TCD, University of Limerick, and other partner institutions. It is one of the largest data analytic centres in Europe ensuring that you are kept informed about cutting-edge data analytics research in Ireland and beyond.

WHAT WILL HELP YOU?

A minimum grade H3 in Mathematics is required.

COURSE STRUCTURE

This BSc programme provides you with in-depth training in all aspects of the process of turning raw data into actionable information. The computer science modules provide you with expertise in database management, programming and algorithm design and the mathematical sciences modules provide the fundamental basis for transforming data into useful information in a principled manner.

FIRST YEAR MODULES

All modules are 5 credits unless otherwise stated.

CORE: **CS1106** Introduction to Relational Databases, **CS1112** Foundations of Computer Science I, **CS1113** Foundations of Computer Science II, **CS1117** Introduction to Programming (15 credits), **AM1054** Mathematical Software, **MA1058** Introduction to Linear Algebra, **MA1059** Calculus, **ST1050** Statistical Programming in R, **ST1051** Introduction to Probability and Statistics.

Plus 5 credits from the following:

ELECTIVES: **AM1053** Introduction to Mathematical Modelling, **ST1401** Introduction to Operations Research.

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COMPUTER SCIENCE, UCC



WORK PLACEMENT

In your third year, you will undertake a six-month work placement in a relevant industry. This programme, run in conjunction with Career Services at UCC, gives you the opportunity to gain practical experience related to your course. Usually you will complete your third-year examinations in December and follow this with your work placement from March to August (inclusive). The placement helps you put academic theories into practice, improves your confidence, allowing you to travel and gain experience, and certainly increases your employability. The work placement is jointly monitored by a UCC staff member in conjunction with an employee of the company.



CAREER OPPORTUNITIES

There is a considerable demand for Data Science and Analytics graduates, nationally and internationally, in leading multinational corporations, SMEs and Government agencies in all sectors of the economy. You will be one of the most highly sought after graduates from a broad range of employers. Please see our online page (www.ucc.ie/en/ck411) to view the list of employers seeking your skills as a graduate of Data Science Analytics. They include employers from banking and financial services, energy, food & agriculture, gaming, Government, health, insurance, management consultancy, pharmaceutical industries, software, sport and technology.



GRADUATE STUDY OPTIONS

As a data science graduate, you will have studied computer science, statistics, mathematics and applied mathematics, which qualifies you to progress to numerous taught and research-led Masters or PhD programmes in Mathematical Sciences or Computer Science. Programmes to consider in UCC include: MSc Data Science & Analytics, MSc Computing Science, MSc Statistics (by research), MSc Actuarial Science, MSc Financial & Computational Mathematics, MSc Bioinformatics & Computational Biology, MSc Mathematical Modelling & Self-Learning Systems.

KEEPING UP TO DATE

THE FOLLOWING SITES ARE
ESSENTIAL FOR ALL THINGS
DATA SCIENCE AND ANALYTICS

Codementor: www.codementor.io

Data Science Central:
www.datasciencecentral.com

Dataflog: www.dataflog.com

KD nuggets: www.kdnuggets.com