



**University of  
Central Lancashire**  
UCLan Cyprus



**Institute of  
mathematics**  
& its applications

# **BSc (Hons) Mathematics & Statistics**

The BSc (Hons) Mathematics and Statistics is a programme of study that covers topics across the whole range of mathematical areas and statistical fields, with opportunity to specialise further on statistics. Our curriculum is built on a variety of themes, which run through all academic years of the programme; mathematical methods, statistical methods, analysis, probability, algebra, mechanics, computational mathematics, computational statistics and data analysis.

A variety of innovative teaching and assessment methods challenge the students to apply their mathematical and statistical knowledge and skills to real-world problems. Moreover, the programme develops communication skills, such as delivering oral presentations and designing conference style posters. The latter years of the programme have a number of specialist optional modules that will enable students to focus their degree towards their personal interests.

Overall, the BSc (Hons) Mathematics and Statistics programme provides students with sufficient in-depth knowledge to enable them to embark on further studies or apply that knowledge in the industry. Graduates of mathematical sciences can be employed in several areas, such as education, biology, economics, engineering, genetics, marketing, medicine, psychology, public health and sports, and work as statisticians, data analysts, risk analysts, biostatisticians and quality analysts, among many.

The BSc (Hons) Mathematics and Statistics programme is aligned with the accreditation of the Institute of Mathematics and its Applications (IMA), the UK's professional and learned society for qualified and practising mathematicians.



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# BSc (Hons) Mathematics & Statistics

## YEAR 1

S E

### COMPULSORY

Discrete Mathematics	YL	10
Functions, Vectors & Calculus	1	10
From Geometry into Algebra	2	10
Introduction to Probability & Statistics	2	10

### OPTIONAL

History of Mathematics	1	10
Study & Research Skills	YL	10
Academic Writing	2	10
University Elective	1 or 2	10

## YEAR 2

S E

### COMPULSORY

Analysis I - Real Numbers, Sequences, Series & Continuity	1	10
Theory of Probability	1	10
Introduction to Algebra & Linear Algebra	2	10
Computational Mathematics	2	10
Theory of Statistics	2	10

### OPTIONAL

Mechanics	YL	10
Introduction to Applied Mathematics	1	10

## YEAR 3

S E

### COMPULSORY

Ordinary Differential Equations	1	10
Numerical Methods	1	10
Stochastic Processes	1	10
Analysis II - Differentiation & Riemann Integration	2	10
Linear & Generalised Linear Models	2	10

### OPTIONAL

Cryptology	2	10
Vector Calculus	2	10
University Elective	1 or 2	10
Mathematics / Statistics Placement	2 or 3	10

## YEAR 4

S E

### COMPULSORY

Complex Analysis	1	10
Advanced Computational Statistics & Data Analysis	1	10
Time Series	1	10
Analysis III - Metric & Topological Spaces	2	10

### OPTIONAL

Mathematics Project	YL	10
Partial Differential Equations & Integral Transforms	2	10
Advanced Topics in Mathematics / Statistics	2	10
Actuarial Mathematics & Statistics	2	5
Introduction to Econometrics	2	5
University Elective	1 or 2	10

## CAREER OPTIONS

Mathematics offers a diverse and rewarding range of careers. Examples include working in education, academic research, consultancies, accountancy, financial services, insurance companies, IT and Computing, telecommunications, and healthcare to name but a few sectors. For further information you can visit [www.math-careers.org.uk](http://www.math-careers.org.uk) (managed and maintained by the Institute of Mathematics and its Applications).

These are valuable contributions to the Cypriot economy and equip both local and international students to compete in the global employment market. Mathematicians and Statisticians are ranked by [www.careercast.com](http://www.careercast.com) as some of the best jobs based on criteria including income, job outlook, work environment and stress. Other highly ranked jobs including those of a data scientist and of an actuary are highly mathematical and attract many people with a very strong mathematical background.

## PROFESSIONAL ACCREDITATION

The BSc (Hons) Mathematics and Statistics programme is aligned with the accreditation of the Institute of Mathematics and its Applications (IMA), the UK's professional and learned society for qualified and practising mathematicians. The programme will meet the educational requirements of the Chartered Mathematician designation, awarded by the IMA, when it is followed by subsequent training and experience in employment to obtain equivalent competences to those specified by the UK Quality Assurance Agency (QAA) for taught master's degrees.

## ENTRY REQUIREMENTS

The minimum requirements are:

- > Apolytirion or High School Leaving Certificate, or 96 A' Level points (new Tariff system) in relevant subjects.
- > Proof of English Language knowledge to a score of at least IELTS 5.5, or other equivalent according to the Common European Framework of Reference for Languages (CEFR).

S: SEMESTER / E: ECTS / YL: YEAR LONG

The University reserves the right to make amendments to programmes in order to improve the quality of learning content and outcomes.

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