

Studying for your Degree

School of Computing and Mathematical Sciences
Birkbeck, University of London
A first-year comparison guide
For incoming students

Degree Pathways Overview

- BSc Computer Science (Tingting Han)
- BSc Computer Science with AI (Ian Hollender)
- BSc Computer Science for Cybersecurity (George Roussos)
- BSc Data Science (Felix Reidl)
- BSc Business Computing (Dimitrios Airantzis)
- BSc Mathematics and Computer Science (Dan McVeagh)
- BSc Mathematics and Data Science (Dan McVeagh)

Degree Pathways Overview

- BSc Computer Science (Tingting Han)
- BSc Computer Science with AI (Ian Hollender)
- BSc Computer Science for Cybersecurity (George Roussos)
- BSc Data Science (Felix Reidl)
- BSc Business Computing (Dimitrios Airantzis)
- BSc Mathematics and Computer Science (Dan McVeagh)
- BSc Mathematics and Data Science (Dan McVeagh)



Degree Pathways Overview

- BSc Computer Science (Tingting Han)
- BSc Computer Science with AI (Ian Hollender)
- BSc Computer Science for Cybersecurity (George Roussos)
- BSc Data Science (Felix Reidl)
- BSc Business Computing (Dimitrios Airantzis)
- BSc Mathematics and Computer Science (Dan McVeagh)
- BSc Mathematics and Data Science (Dan McVeagh)



Degree Pathways Overview

- BSc Computer Science (Tingting Han)
- BSc Computer Science with AI (Ian Hollender)
- BSc Computer Science for Cybersecurity (George Roussos)
- BSc Data Science (Felix Reidl)
- BSc Business Computing (Dimitrios Airantzis)
- BSc Mathematics and Computer Science (Dan McVeagh)
- BSc Mathematics and Data Science (Dan McVeagh)



Degree Pathways Overview

- BSc Computer Science (Tingting Han)
- BSc Computer Science with AI (Ian Hollender)
- BSc Computer Science for Cybersecurity (George Roussos)
- BSc Data Science (Felix Reidl)
- BSc Business Computing (Dimitrios Airantzis)
- BSc Mathematics and Computer Science (Dan McVeagh)
- BSc Mathematics and Data Science (Dan McVeagh)



Degree Pathways Overview

- BSc Computer Science (Tingting Han)
- BSc Computer Science with AI (Ian Hollender)
- BSc Computer Science for Cybersecurity (George Roussos)
- BSc Data Science (Felix Reidl)
- BSc Business Computing (Dimitrios Airantzis)
- BSc Mathematics and Computer Science (Dan McVeagh)
- BSc Mathematics and Data Science (Dan McVeagh)



Degree Pathways Overview

- BSc Computer Science (Tingting Han)
- BSc Computer Science with AI (Ian Hollender)
- BSc Computer Science for Cybersecurity (George Roussos)
- BSc Data Science (Felix Reidl)
- BSc Business Computing (Dimitrios Airantzis)
- BSc Mathematics and Computer Science (Dan McVeagh)
- BSc Mathematics and Data Science (Dan McVeagh)

Degree Pathways Overview

- BSc Computer Science (Tingting Han)
- BSc Computer Science with AI (Ian Hollender)
- BSc Computer Science for Cybersecurity (George Roussos)
- BSc Data Science (Felix Reidl)
- BSc Business Computing (Dimitrios Airantzis)
- BSc Mathematics and Computer Science (Dan McVeagh)
- BSc Mathematics and Data Science (Dan McVeagh)

Year 1 — Similarities and Differences

Three degree clusters
Shared foundations
Different first-year balance

The Three First-Year Clusters

- Core Computing & Technology
 - Computer Science
 - CS with AI
 - CS for Cybersecurity
 - Business Computing

The Three First-Year Clusters

- Data
 - Data Science...

The Three First-Year Clusters

- Mathematics Joint-Honours
 - Mathematics and Computer Science
 - Mathematics and Data Science

Common Ground

- Introduction to programming
- Maths foundations
- Databases and data
- No fluent coding assumed

Cluster 1: Core Computing & Tech

- Computer Science
- CS with AI
- CS for Cybersecurity
- Business Computing

Cluster 1: First-Year Spine

- Computer Systems
- Database Technology
- Mathematics for Computing
- Systems Analysis
- Programming and problem-solving

Distinctive Cluster 1 Feature

Professional Issues in Computing

Cluster 2: Data

- Data Science
- Software plus data thinking
- More data-focused Year 1

What Changes in Data Science

- Programming still central
- Databases still central
- Less workflow engineering
- More data modelling
- More dataset interpretation

Cluster 3: Mathematics Joint-Honours

- Mathematics and Computer Science
- Mathematics and Data Science
- Two rigorous disciplines
- Most theory-dense start

Biggest Structural Difference

- Calculus and linear algebra
- Algebra and core maths
- Fewer broad IT modules
- Proof-based foundations
- Why algorithms work

Summary Advice

- Tech cluster
 - broad software systems start
 - specialise later
- Data Science
 - programming plus data modelling
 - dataset-first mindset
- Math joint-honours
 - proof-heavy theory start
 - less broad IT context