Programmes & Specialisms

MSc Programmes

Informatics
Artificial Intelligence
Cognitive Science

Specialist Areas

Intelligent Robotics
Agents, Knowledge and Data
Machine Learning
Natural Language Processing
Neural Computation and Neuroinformatics
Cognitive Science
Analytical and Scientific Databases
Computer Systems, Software Engineering & HPC
Cyber Security and Privacy
Programming Languages
Theoretical Computer Science
Bioinformatics, Systems and Synthetic Biology
Music Informatics

Data Science
## Programme structure

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Semester 2</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informatics Research Review (10 points)</td>
<td>Informatics Project Proposal (10 points)</td>
<td>Individual Project supervised over the summer (60 points)</td>
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<tr>
<td>Taught Courses (50 points)</td>
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</tbody>
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Courses

- Around 50 taught courses at MSc level
- Many additional undergraduate/external options
- Taught by international experts

We are the largest and highest rated computing department in the UK

MSc-level courses
- Adaptive Learning Environments
- Advanced Databases
- Advanced Natural Language Processing
- Advanced Vision
- Applied Databases
- Automated Reasoning
- Automatic Speech Recognition
- Bioinformatics 1
- Bioinformatics 2
- Cognitive Modelling
- Cognitive Neuroscience of Language
- Compiler Optimisation
- Computational Cognitive Neuroscience
- Computational Neuroscience of Vision
- Computational Systems Biology
- Computer Animation and Visualisation
- Computer Graphics
- Computer Networking
- Data Integration and Exchange
- Data Mining and Exploration
- Informatics Entrepreneurship
- Informatics Research Methodologies
- Information Theory
- Intelligent Autonomous Robotics
- Knowledge Modelling and Management

Undergraduate courses
- Agent Based Systems
- Algorithms and Data Structures
- Compiling Techniques
- Computability and Intractability
- Computer Architecture
- Computer Design
- Database Systems
- Enterprise Computing
- Introduction to Cognitive Science
- Introduction to Java Programming
- Introduction to Vision and Robotics
- Semantics and Implementation
- Logic Programming
- Operating Systems
- Software Testing

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Programme Guide > Courses and Specialist Areas
for Areas overview page and links to pages for each Area. Each area page links to course descriptions.

Near foot of each course description page, follow the Course URL link and then the School Course Page link to see a course’s notes and materials.

For required maths and programming background, see overview page, Area pages, and the Other requirements boxes on course description pages.
Dissertation

- May to August

- Work with supervisor on an individual project

Some Sample Dissertations
- Video Tracking of Drosophila Melanogaster Gravitaxic Behaviour
- Controlling robot in virtual world applying AI planning
- A generic metadata management tool for large-scale data-intensive applications
- Automated Stock Trading and Portfolio Optimization Using XCS Trader and Technical Analysis
- Accuracy measures for neural population codes with correlated variability
- Probabilistic Time Lapse Video
- Query Evaluation over Distributed File Structures
- Paying Attention to Attention: towards a unified computational model of visual perceptual learning
- Implementing a Workflow Engine for Executing Business Process and Business Analysis
- Exploring Neural Models of Path Integration
- Using Sub-optimal HTN-Generated Plans as a Basis for Searching for Near-optimal Plans
- Creating a Natural Logic Inference System with Combinatory Categorial Grammar
- Evaluating the Quality of Data on the Web

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