

University of Sussex
Informatics

our degrees informatics MSc

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University of Sussex
Informatics



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Visit our blog:

www.createdbyusblog.com

This booklet is designed to give you an outline of our MSc degree courses. If you have any questions, please do not hesitate to contact us.

Entry requirements for our MSc degree courses

A first- or second-class undergraduate honours degree (Computing with Digital Media and Management of Information Technology).

A first- or upper second-class undergraduate honours degree (all other courses).

IELTS 6.5, with not less than 6.0 in each section.

Applications from prospective students with relevant work experience are welcomed and are considered on an individual basis.

Further information on entry requirements can be found at:
www.sussex.ac.uk/study/pg

Informatics at Sussex

Informatics is the discipline of information – concerned with the art, science, technology and human dimension of computational systems, both natural and man-made.

Informatics is an essential part of 21st-century life, and is an exceptionally fast-moving subject that gives rise to a wide range of exciting and challenging problems.

The Department of Informatics at Sussex provides an intellectually stimulating environment in which to study, and we offer a range of taught postgraduate degrees that reflect our innovative and interdisciplinary approach to research and learning.

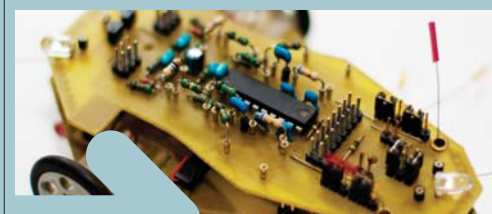
We are a **leading centre for teaching and research** across many aspects of computing, including core aspects of computer science and software systems, artificial intelligence, bio-inspired computing, cognitive science, digital economy, digital media technologies, and human-computer interaction.

Our **cutting-edge courses** are informed by outstanding research – in the latest UK-wide Research Excellence Framework (REF) evaluation, all aspects of our research environment were classified as either ‘world-leading’ or ‘internationally excellent’.

Our degree courses provide a firm foundation in the core topics while also reflecting our **interdisciplinary strengths**, drawing on insights from other subject areas such as engineering, management studies, mathematics, neuroscience, and psychology.

The Department has attractive, **well-equipped computer laboratories** with modern high-spec workstations, and specialist labs for robotics, digital video production and editing, and observational study of human behaviour.

Our **strong links with industry**, including a groundbreaking partnership with one of the world’s leading financial services companies, and an advisory board which assists in shaping course content, ensures Informatics graduates are highly employable at the end of their studies.



MSc in Advanced Computer Science

Overview

This MSc degree equips you to work with tomorrow's computer systems. Platforms may be mobile, embedded, distributed or multi-core and require new techniques to make software efficient, correct and reliable. Networks may be wired or wireless, ad hoc or highly planned, high bandwidth or slow and unreliable – and overlaid with various applications and social connections.

Computers are becoming aware of their surroundings: who is using them, where they are, what interfaces are available, how much energy they consume and the semantics of the data they process. Together these advances lead to challenges of a scale that dwarf the problems computer science has solved up to now.

Your options

Our degrees allow you to tailor the course to your interests with a range of optional modules alongside core modules. *Please be aware that not all permutations of options are always available.*

Your future






The degree equips you with the skills required to pursue a career in software and systems design, including roles requiring cutting-edge specialisation such as in mobile computing, or leadership in complex problem solving. Graduates have gone on to work for major companies such as Accenture, Google and Toyota. The degree is also an ideal route into research in academia or industry.

Applicants

Applicants should have an academic background in computer science or a closely related discipline. Applicants with a science, mathematics or engineering background with significant computing experience will also be considered, as will those with relevant industrial experience.





MSc in Advanced Computer Science
One year full time (two years part time)

Course structure

Autumn term		Spring term	Summer
FULL TIME • 1 YEAR			
Advanced Software Engineering		Web Applications and Services	
Topics in Computer Science		Option 	
Option 		Option 	
Option 		Option 	
		Advanced Computer Science Project	




Autumn options

Select two options from the list below:

-  Cryptography
-  E-Business and E-Commerce Systems
-  Human-Computer Interaction
-  Web Computing

Spring options

Select three options from the list below:

-  Adaptive Systems
-  Advanced Digital Communications
-  Image Processing
-  Machine Learning
-  Mobile 3D Applications
-  Multimedia Design and Applications
-  Technology-Enhanced Learning Environments

MSc in Computing with Digital Media

Overview

This MSc focuses on building distributed multimedia applications, computer generated animations and virtual environments, emphasising a human-centred approach.

The degree has two main strands; addressing (1) the underpinning technologies in graphics, multimedia and programming, and (2) the principled design of effective digital media for entertainment, communication, training and education. It provides experience in the generation of animations, virtual environments and multimedia applications, and gives students the opportunity to build a high quality portfolio of completed digital media work by the end of the degree.

Your options

Our degrees allow you to tailor the course to your interests with a range of optional modules alongside core modules. *Please be aware that not all permutations of options are always available.*

Your future

The degree is excellent preparation for the multimedia and digital systems industries; graduates have gone on to pursue careers in web development, e-learning production, games programming and 3D modelling. This MSc is also ideal preparation for doctoral research in the field of digital media.

Applicants

Applicants should have a background in computer science, mathematics, the natural sciences or practical media.



MSc in Computing with Digital Media
One year full time (two years part time)

Course structure

Autumn term		Spring term	Summer
FULL TIME • 1 YEAR			
3D Animation		Interactive 3D Programming	
3D Modelling and Rendering		Mobile 3D Applications	
Human-Computer Interaction		Multimedia Design and Applications	
Option ●		Option ●	
		Computing with Digital Media Project	

Autumn options

Select one option from the list below:

- Advanced Software Engineering
- Object Oriented Programming

Spring options

Select one option from the list below:

- Generative Creativity
- Live Video Production
- Technology-Enhanced Learning Environments

MSc in Evolutionary and Adaptive Systems

Overview

This MSc provides a solid grounding in the major themes of the area, including biologically-inspired computation, dynamical systems approaches to cognition, evolutionary systems and evolutionary computing, and natural and artificial neural systems.

There are many opportunities for students to interact with leading researchers in related disciplines at Sussex. Students have access to specialist facilities including robotics labs.

Your options

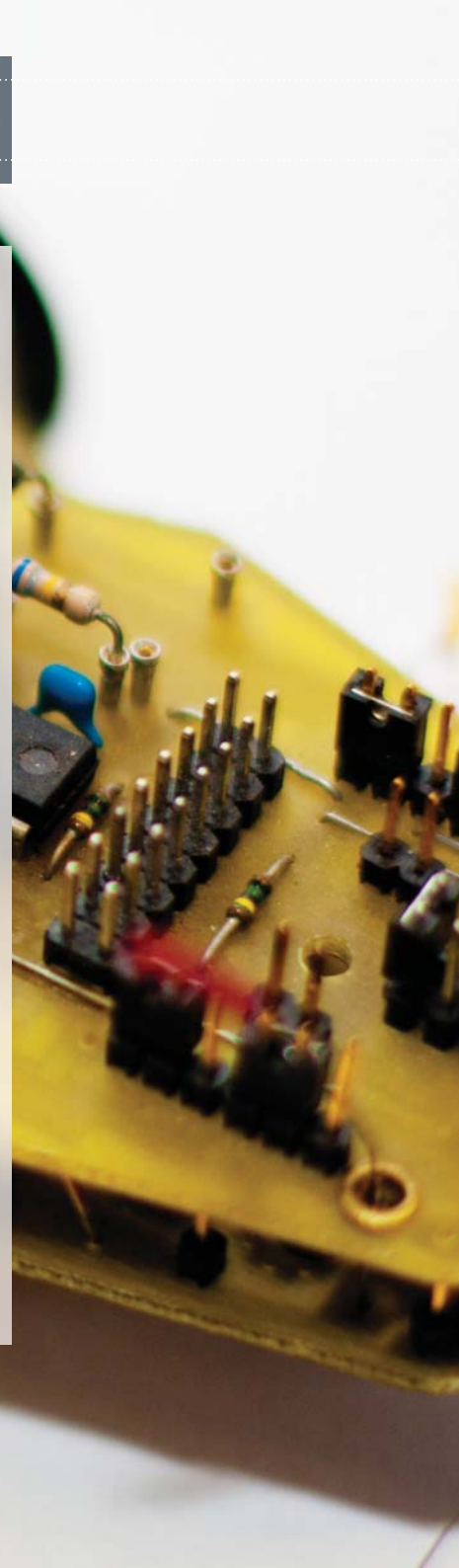
Our degrees allow you to tailor the course to your interests with a range of optional modules alongside core modules. *Please be aware that not all permutations of options are always available.*

Your future

The degree is excellent preparation for research in artificial intelligence, cognitive science, and computational biology, and for careers in the software, entertainment and financial sectors. Graduates have gone on to work for major companies such as Capgemini, IBM, Logica, Microsoft, NaturalMotion and Sega, as well as successfully setting up their own businesses. Many have gone on to doctoral study and now work in academic or industrial research.

Applicants

Applicants should have an academic background in a discipline that requires either numeracy or computer literacy.



MSc in Evolutionary and Adaptive Systems
One year full time (two years part time)

Course structure

Autumn term		Spring term	Summer
FULL TIME • 1 YEAR			
Artificial Life		Adaptive Systems	
Intelligence in Animals and Machines		Neural Networks	
Mathematics and Computational Methods for Complex Systems		Option ●	
Option ●		Option ●	
		Evolutionary and Adaptive Systems Project	

Autumn options

Select one option from the list below:

- Advanced Software Engineering
- Applied Natural Language Processing
- Intelligent Systems Techniques
- Object Oriented Programming

Spring options

Select two options from the list below:

- Advanced Natural Language Engineering
- Computational Neuroscience
- Generative Creativity
- Image Processing
- Machine Learning
- Neuroscience of Consciousness

MSc in Human-Computer Interaction

Overview

This MSc provides multi-disciplinary training to develop technical and analytical skills, an understanding of human-computer interaction, and human-centred approaches to software design and deployment.

A distinctive feature of the degree is the focus on the application of cognitive psychology to technology design, and the seeking of a balance between the interdisciplinarity of cognitive science and the technical skills needed for building systems. Students gain direct experience of a range of methodologies for the design and evaluation of interactive computer systems.

Your options

Our degrees allow you to tailor the course to your interests with a range of optional modules alongside core modules. *Please be aware that not all permutations of options are always available.*

Your future

The degree is excellent preparation for research and development into harnessing computing technology (construed broadly) to fulfill users' needs. Graduates work for a diverse range of organisations from small companies to multinationals such as American Express, the BBC, Eurotherm, HP, Kineo and Stream Media. Others have set up web design, human factors consultancy and new media businesses. Some graduates have continued with doctoral study leading to research and academic careers.

Applicants

Applicants should have an interest in computing systems from a human perspective, and have an academic background in computing or psychology, or another discipline with substantial computing or social science content.

MSc in Human-Computer Interaction
One year full time (two years part time)

Course structure

Autumn term		Spring term	Summer
FULL TIME • 1 YEAR			
Human-Computer Interaction		HCI Advanced Topics	
Real-World Cognition		Psychological Methods for System Evaluation	
Option ●		Technology-Enhanced Learning Environments	
Option ●		Option ●	
		Human Computer Interaction Project	

Autumn options

Select one option from the list below:

- Advanced Software Engineering
- Object Oriented Programming

Select one option from the list below:

- Applied Natural Language Processing
- E-Business and E-Commerce Systems

Spring options

Select one option from the list below:

- Advanced Natural Language Engineering
- Generative Creativity
- Multimedia Design and Applications

MSc in Information Technology with Business and Management

Overview

This MSc develops practical skills in IT with application to business and commerce, and analytical skills in the area of technology and innovation management.

You can choose to structure your studies into standard pathways: e-business/e-commerce systems, human systems, or managing technology innovation; or you can devise your own combination of modules according to your personal interests.

Your options

Our degrees allow you to tailor the course to your interests with a range of optional modules alongside core modules. *Please be aware that not all permutations of options are always available.*

Your future

Successful graduates will have acquired analytical and practical skills that are in high demand in all sectors of the IT industry. Some have established careers in banking and energy sectors, while others have gone on to pursue careers as IT consultants, project managers and software professionals. Employers of our graduates include American Express, HSBC, Bangkok Bank, KPMG, G4 Analytics and RDF Group.

Applicants

Applicants should have a background in computing, information technology, or engineering with some computer programming content.

MSc in Information Technology with Business and Management

One year full time (two years part time)

Course structure

Autumn term		Spring term	Summer
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FULL TIME • 1 YEAR

E-Business and E-Commerce Systems		Managing Complex Projects, Products and Systems	
Web Computing		Web Applications and Services	
Option ●		Option ●	
Option ●		Option ●	
		Information Technology with Business and Management Project	

Autumn options

Select one option from the list below:

- Business and Project Management
- Change and Leadership
- Human-Computer Interaction
- Intelligent Systems Techniques
- Management, Innovation and Organisational Performance

Select one option from the list below:

- Advanced Software Engineering
- Object Oriented Programming
(Students with prior accredited learning in Object Orientated Programming may instead take an option from the first list)

Spring options

Select two options from the list below:

- The Business Context in East Asia/Europe
- HCI Advanced Topics
- Information and Communication Technology Policy and Strategy
- Machine Learning
- Multimedia Design and Applications
- Strategic Management

MSc in Intelligent Systems

Overview

This MSc covers both fundamental techniques in artificial intelligence as well as practical techniques for the design and implementation of intelligent systems.

The degree introduces core topics in artificial intelligence and computer science, and allows students to specialise in areas including creative systems, computational neuroscience, adaptive systems, and cognitive science.

Your options

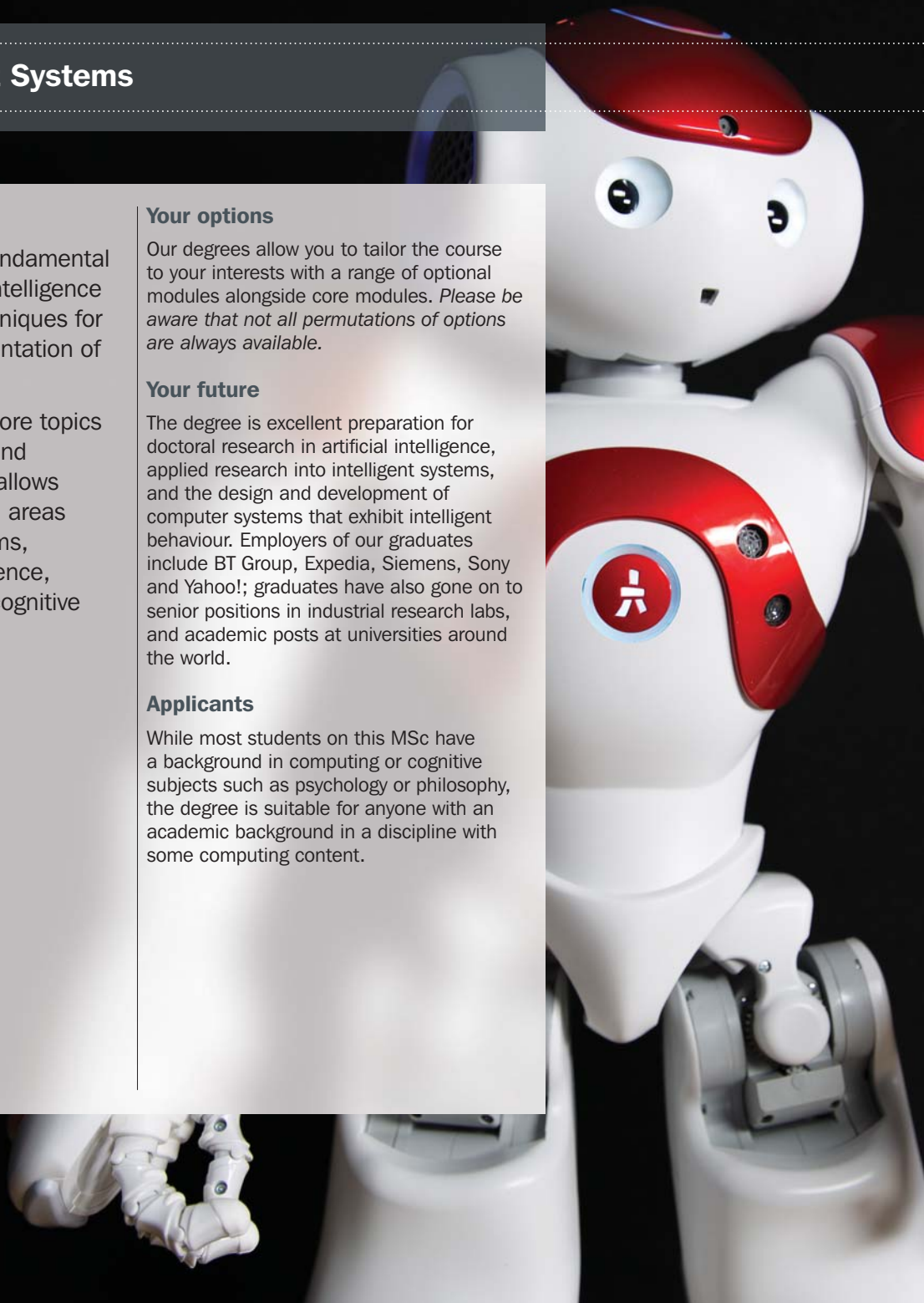
Our degrees allow you to tailor the course to your interests with a range of optional modules alongside core modules. *Please be aware that not all permutations of options are always available.*

Your future

The degree is excellent preparation for doctoral research in artificial intelligence, applied research into intelligent systems, and the design and development of computer systems that exhibit intelligent behaviour. Employers of our graduates include BT Group, Expedia, Siemens, Sony and Yahoo!; graduates have also gone on to senior positions in industrial research labs, and academic posts at universities around the world.

Applicants

While most students on this MSc have a background in computing or cognitive subjects such as psychology or philosophy, the degree is suitable for anyone with an academic background in a discipline with some computing content.



MSc in Intelligent Systems
One year full time (two years part time)

Course structure

Autumn term		Spring term	Summer
FULL TIME • 1 YEAR			
Applied Natural Language Processing		Image Processing	
Intelligent Systems Techniques		Machine Learning	
Option ●		Option ●	
Option ●		Option ●	
		Intelligent Systems Project	

Autumn options

Select one option from the list below:

- Artificial Life
- Intelligence in Animals and Machines
- Mathematics and Computational Methods for Complex Systems
- Real-World Cognition
- Web Computing

Select one option from the list below:

- Advanced Software Engineering
- Object Oriented Programming

Spring options

Select two options from the list below:

- Adaptive Systems
- Advanced Natural Language Engineering
- Computational Neuroscience
- Generative Creativity
- Neural Networks
- Neuroscience of Consciousness
- Technology-Enhanced Learning Environments

MSc in Management of Information Technology

Overview

This MSc will equip you with the skills to analyse information technology needs and to devise innovative solutions in companies and other organisations with complex and demanding information technology (IT) system requirements.

You will learn how to design, evaluate and apply information technology systems in a business setting – taking account of human, organisational and strategic factors. You will learn about the concepts and principles of IT systems and their interfaces, and the theories and techniques relating to the management of IT as an innovative and strategic resource in an organisation.

This interdisciplinary course is taught jointly in the Department of Informatics and the Department of Business and Management, by staff specialising in computer science and information technology systems, as well as management and technology innovation.

Your options

Our degrees allow you to tailor the course to your interests with a range of optional modules alongside core modules. *Please be aware that not all permutations of options are always available.*

Your future

There is a global shortage of IT professionals. This course provides a strong theoretical and practical preparation for a career in this area.

You will be suited to roles requiring an integrated understanding of the internal and external business context, the factors influencing successful IT innovation, the opportunities presented by new kinds of information technology in business, and the successful planning and deployment of IT systems.

Applicants

Applicants with a range of academic backgrounds are encouraged to apply.

MSc in Management of Information Technology
One year full time (two years part time)

Course structure

Autumn term		Spring term	Summer
FULL TIME • 1 YEAR			
Change and Leadership		HCI Advanced Topics	
E-Business and E-Commerce Systems		Managing Complex Projects, Products and Systems	
Human-Computer Interaction		Strategic Management	
Management, Innovation and Organisational Performance		Option ●	
		Management of Information Technology Project	
Personal and Professional Development <i>(This module is taken throughout the year)</i>			

Spring options

Select one option from the list below:

- The Business Context in East Asia
- The Business Context in Emerging Economies
- The Business Context in Europe

Location

The University of
Sussex is located on
the outskirts of the
city of

**Brighton
& Hove**



Cultured

A wealth of theatres,
cinemas, music
venues, galleries,
and internationally
renowned arts
festivals



A city by the sea

Lively and
cosmopolitan with
a diverse cultural
scene

Stylish

The best shopping
south of London,
with specialist
boutiques and
mainstream stores



Delicious

An abundance of
restaurants, cafés,
pubs and clubs...
and all this is just
one hour away from
London

Further information

Scholarships

A range of University Scholarships are available to applicants with the highest academic ability and potential.

We offer further, named scholarships to students on the MScs in Advanced Computer Science, Evolutionary & Adaptive Systems and Intelligent Systems, funded by philanthropic donations from companies and alumni.

For details of these and other awards, bursaries and scholarships, visit

www.sussex.ac.uk/funding

How to apply

You can apply for Masters degree courses in Informatics at any time, for entry at the start of the next academic year in September. However, early application (preferably by May) is advised, particularly if you will need a visa to come and study in the UK. If you are applying for a scholarship from Sussex, you must first submit an application for a place on a degree course.

To submit your application, you can use our convenient online system, at

www.sussex.ac.uk/study/pg/applying

Further information

For more information on our courses, entry requirements, fees, scholarships, and how to apply, visit

www.sussex.ac.uk/informatics/pgstudy

You can also contact us with any general or course enquiries. For our contact details, see the back cover of this brochure.

Disclaimer

The information presented in this booklet is correct at the time of going to print (January 2016) but modules running in future academic years may be subject to change. The reason for this is that Informatics is a constantly developing area and so we regularly review and update our modules and options to reflect this and give you the best student experience. Please refer to our web pages for the most up to date information on courses and modules: www.sussex.ac.uk/informatics/pgstudy

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