Computing Science
Undergraduate study
Come and visit us

Open days and student visits

www.glasgow.ac.uk/visit

We offer many opportunities for you to visit us and find out about the University.

- **Open days:** If you're interested in visiting the University before you apply for a specific programme, we'd be happy to welcome you to one of our Open Days held in June, September and October.

- **Applicants’ Visit Day:** Once you have applied to and received an offer from the University, you will get another chance to visit us on our Applicants’ Visit Day in March.

- **Afternoon visits:** If you can’t make either of the above we will be running three afternoon visits throughout the course of the year.

- **Plan your own visit:** You are welcome to visit the University at a time that suits you, to gather information and see the sights of our beautiful campus in your own time.

How to apply

www.ucas.com

You must apply through the Universities & Colleges Admissions Services (UCAS), tel: 0871 468 0468 or visit their website.

The Glasgow experience

The University of Glasgow is one of the world’s top universities. Since opening our doors over 550 years ago, we’ve dedicated our time to inspiring great minds throughout history, from the father of economics, Adam Smith, to the pioneer of television, John Logie Baird.

Here are just a few reasons why our students choose to join us:

- Established in **1451**, fourth oldest University in the English-speaking world
- **23,000** students from **130** countries
- Member of the prestigious **Russell Group** of leading UK research universities
- **1st** in the Russell Group for student satisfaction (International Student Barometer 2012)
- One of the UK’s **top 3** best-value universities (Student Value for Money Report 2012)
- In the UK’s **top 6** for career prospects (The Guardian University Guide 2013)
- Over **100** clubs and societies, from karate to student theatre
- **Two** student unions with GUU being voted **UK Student Union of the Year**
- One of the best libraries in Europe, open **361** days of the year from 7.15am-2am with **2.5 million** print books and journals.

Find out more about the Glasgow experience:

- Get our students’ views on campus life: www.glasgowgen.net
- Chat to one of our current students: www.glasgow.ac.uk/studentnetwork
- Email us direct: student.recruitment@glasgow.ac.uk
Computing Science

The study of computing science is wide-ranging: from programming and engineering large software systems, to the design and evaluation of human-computer interfaces, algorithms, computer and network systems, and information retrieval and storage systems.

Programme structure

Year 1
Our students have a wide range of previous experience in programming, including none at all. Unusually at university level, we accommodate these differing experience levels in first year by offering alternative routes to ensure that whatever your background, you will enjoy a stimulating curriculum.

You will also study two other subjects of your choice in year 1 – www.glasgow.ac.uk/ug/aboutdegrees.

Year 2
In your second year you will study Java programming, object-oriented software engineering, data structures and algorithms, algorithmic foundations, computer systems and information management.

You will also study one or two other subjects in year 2 – www.glasgow.ac.uk/ug/aboutdegrees.

Years 3 and 4
If you successfully complete the courses in first and second years, you may move on to Honours (years 3 and 4). You will cover the essential aspects of computing science in breadth and depth by the end of third year. In fourth year you will specialise in chosen areas. Together with team projects and a substantial individual project, the programme provides excellent preparation for professional computing scientists.

Year 5
Computing Science can be taken as an MSci, which includes an additional year. Students on the MSci programme follow the BSc Honours degree programme up to the end of their fourth year of study. This is followed in fifth year by additional advanced modules and a substantial research-oriented project.

Special feature
There is a substantial emphasis on programming in first year, which we view as a fundamental skill. We also provide a broad introduction to other key areas of the subject, including computer systems, databases, and human–computer interaction.

Partnership and industry links
We provide our students with excellent work experience opportunities. You may be able to work throughout the UK as well as in Europe and the USA. Organisations who have employed our students include: IBM, Amazon, Memex, Real Time, Google, Reuters, JP Morgan, Goldman Sachs, Morgan Stanley.

Our international links
Computing Science students who wish to study abroad usually do so during their second year and we have exchange agreements in place with a variety of internationally leading universities across Europe. You can also spend a year abroad in North America, Australasia or at strong universities in any other country.

Career prospects
Our recent graduates have been employed by
- Codeplay, software engineer
- JP Morgan, software developer
- Standard Life, system analyst
- Morgan Stanley, system analyst
- Hewlett Packard, software engineer.

You may also be interested in
- Electronic & Software Engineering
- Mobile Software Engineering
- Neuroinformatics (Computing Science & Physiology)
- Software Engineering

Additional accreditation (see panel for details)

YES

Data published by Unistats (unistats.direct.gov.uk) January 2013.

Degrees and UCAS code
BSc (Hons) (G400) – four years
MSci (G402) – five years

Accreditation
Honours graduates are eligible for membership of the British Computer Society and, after relevant industrial experience, they can apply to become Chartered IT Professionals.

Joint Honours
At Honours level, Computing Science can be taken as a Single Honours or Joint Honours degree. See www.glasgow.ac.uk/ug/computingscience for a full list of Joint Honours combinations and UCAS codes.

Entry requirements
BSc, MSci
Highers: AAAA or AAABB (including two science subjects) at first sitting = unconditional offer. Applicants who achieved AAABB or AABBB (including two science subjects) at their first sitting WILL receive an offer from the University. This offer may be conditional (on second sitting results) or unconditional, depending on how many applications are received from students who have attained these grades. Additional offers, either conditional or unconditional, MAY be made to applicants who achieved between AB and AAB (including two science subjects) at their first sitting. A decision re these applications will be made in March 2014 once all applications have been reviewed. Applicants who receive an offer conditional on second sitting results will be required to study Advanced Highers in relevant subjects as an integral part of their conditional offer.

A-levels: AAB, including two science subjects. Normally have A-level Mathematics at B or above.

IB: A minimum of 34 points is required to be considered for an offer. Actual offers will specify subjects and grades to be attained at Higher Level.

For a full list of alternative qualifications please see www.glasgow.ac.uk/undergraduate/entryrequirements.

Advanced entry
If you have exceptional A-level or Advanced Higher grades it’s possible to follow a faster route, which allows you to complete a standard BSc (Hons) or MSci degree in one year less than usual – see www.glasgow.ac.uk/undergraduate/degrees/advancedentry.

E: compsci-advice@glasgow.ac.uk
W: www.glasgow.ac.uk/ug/computingscience
Electronic & Software Engineering

Electronic and software engineering combines the study of hardware and software. It will give you a deep understanding of the knowledge required to lead the teams that will design and build the computerised systems of the future.

90% 91% YES

Programme structure
You will study the same courses in the first three years whether you are on the BEng, BSc or MEng degree programme. Your selection for BEng or MEng depends on your progress record in your first three years.

Year 1
Your first year of study will include courses in electronics and electrical engineering, mathematics and computing science. You will study foundational analogue and digital electronics, and will design, simulate and test circuits in the laboratory. You will develop computer problem-solving skills that are applicable in any programming language.

Years 2 and 3
You will gain a thorough grounding in hardware and software aspects of computer systems, including expertise in programming and software engineering using Java, detailed knowledge of operating systems and networking, a solid foundation in databases and experience with electronic design software. This will be combined with a working knowledge of electrical circuit theory, analogue and digital electronic system design and digital communications.

Years 4 and 5
The main route to becoming a fully chartered engineer is through the MEng degree, which usually takes five years. The BEng and BSc degrees remain popular and can normally be completed in four years. To become a fully chartered engineer with a BEng degree requires further study after graduation, which can be done part-time from work.

Whether you are a BSc, BEng or MEng student, you will have a wide choice of technical options in fourth year, choosing half your specialist topics from electronics and electrical engineering (including VLSI design and robotics) and half from computing science (including artificial intelligence, software engineering processes and network communications).

You will also gain expertise in professional aspects including economics, project organisation, environmental issues and safety. If you are a BEng or BSc student, you will undertake a substantial individual project under one-to-one supervision.

If you are admitted into the MEng route you will have the opportunity to take part in a multidisciplinary integrated system design project, working in teams alongside students of other engineering disciplines. In fifth year you will complete a six-month project abroad and then take further advanced technical subjects.

Partnership and industry links
Between third and fourth year you will undertake a work placement in industry. We can assist you in finding a placement in the UK or overseas. There is also an option to concentrate on a comprehensive management course supported by many manufacturing companies in Scotland.

Our international links
As an MEng student you will complete a six-month research and development project in an international company or research lab, in fifth year. If you have chosen to study a European language you may be assigned to a host organisation in Europe.

Career prospects
Previous graduates have found employment in a wide range of industries, including software houses, electronics companies designing computer-based equipment and commercial institutions such as banks and insurance companies. Our graduates have found jobs with Agilent, ARM, BMW, Ion Torrents, Thales and Wolfson Microelectronics, among many others.
Mobile Software Engineering

This degree programme is designed for computing science students who wish to specialise in the development of software systems for mobile, embedded platforms such as mobile phones, personal digital assistants or portable entertainment systems, such as iPods.

Students were satisfied overall

100% Students in work/study six months after finishing

Additional accreditation (see panel for details)

Data published by Unistats (unistats.direct.gov.uk) January 2013.

Programme structure

Year 1
In your first year you will take an introductory programming course that emphasises the principles of programming and a course on computing fundamentals. You will also study two other subjects of your choice in year 1 – www.glasgow.ac.uk/ug/aboutdegrees.

Year 2
In your second year you will study Java programming, object-oriented software engineering, data structures and algorithms, algorithmic foundations, computer systems and information management. You will also study one or two other subjects in year 2 – www.glasgow.ac.uk/ug/aboutdegrees.

Years 3 and 4
If you progress to Honours (years 3 and 4), you will study courses that present a practical, design-oriented approach to computing, covering software engineering itself and related topics such as embedded systems, databases, human-computer interaction and real-time systems.

Practical work is an essential part of the degree programme and in third year you will take part in a mobile software engineering team project, using state-of-the-art mobile computing equipment.

Fourth-year individual projects have a mobile software engineering focus and allow you to explore some topics in more depth.

Year 5
Mobile Software Engineering can be taken as an MSci, which includes an additional year. Students on the MSci programme follow the BSc Honours degree programme up to the end of their fourth year of study. This is followed in fifth year by additional advanced modules and a substantial research-oriented project.

Partnership and industry links
The University enjoys excellent industrial links with the top companies in this area and we provide our students with excellent work experience opportunities. You may be able to work throughout the UK as well as in Europe and the USA. Organisations which have employed our students include: IBM, Amazon, Memex, Real Time, Google, Reuters, JP Morgan, Goldman Sachs, Morgan Stanley, Nokia, Orange and Microsoft Research.

Our international links
Students who wish to study abroad usually do so during their second year and we have exchange agreements in place with a variety of internationally leading universities across Europe. You can also spend a year abroad in North America, Australasia or at strong universities in any other country.

Career prospects
Our graduates are in demand in all sectors of business and industry and find challenging opportunities to work in companies ranging from large multinationals to small start-up companies developing innovative products. The effects of software running on mobile devices are having an impact on all areas of life. An understanding of the specific challenges and opportunities of mobile device development is important not just for manufacturers, but for software service companies, advertisers, government and education. Graduates from this degree programme are placed at the forefront of developments in this field.

You may also be interested in
• Computing Science
• Computing Science & Physiology
• Electronic & Software Engineering
• Software Engineering

Degrees and UCAS codes
BSc (Hons) (G602) – four years
MSci (I300) – five years

Accreditation
Honours graduates are eligible for membership of the British Computer Society (MBCS) and, after relevant industrial experience, can apply to become Chartered IT Professionals (CITP).

Entry requirements
BSc, MSci
Highers: AAAA or AAABB (including two science subjects) in first sitting = unconditional offer.

Applicants who achieved AAAB or AABBB (including two science subjects) at their first sitting WILL receive an offer from the University. This offer may be conditional (on second sitting results) or unconditional, depending on how many applications are received from students who have attained these grades.

Additional offers, either conditional or unconditional, MAY be made to applicants who achieved between ABBB and AABB (including two science subjects) at their first sitting. A decision re these applications will be made in March 2014 once all applications have been reviewed.

Applicants who receive an offer conditional on second sitting results will be required to study Advanced Highers in relevant subjects as an integral part of their conditional offer.

A-levels: AAB. Normally have A-level Mathematics at B or above.

IB: A minimum of 34 points is required to be considered for an offer. Actual offers will specify subjects and grades to be attained at Higher Level.

For a full list of alternative qualifications please see www.glasgow.ac.uk/undergraduate/entryrequirements.

E: compsci-advice@glasgow.ac.uk
W: www.glasgow.ac.uk/ug/mobilesoftwareengineering

90% Students were satisfied overall

100% Students in work/study six months after finishing

Additional accreditation (see panel for details)
Neuroinformatics (Computing Science & Physiology)

Neuroinformatics combines neuroscience (the study of the brain) and information science (the collecting, storing, and arranging of information, especially using powerful computers).

Programme structure
This innovative and challenging degree programme examines the application of computational and analytical techniques to neuroscience, which has led to a recent explosion in computer modelling of complex physiological processes, ranging from the behaviour of single neurones to high-level cognitive processes.

Years 1 and 2
In the first two years you will study a combination of computing science, mathematics, biology and physiology.

Years 3 and 4
If you progress to Honours (third and fourth years) you will acquire computing science and physiology which underpin information processing. This programme is particularly suited to graduate entry into Medicine.

Career prospects
Our graduates go on to undertake research or are employed in industry or commerce. You will be well prepared to work in industries which also require an understanding of the neural processes of communication and control – for example, the pharmaceutical or engineering control industries.

You may also be interested in
- Computing Science
- Electronic & Software Engineering
- Mobile Software Engineering
- Software Engineering
Software Engineering

Software engineering involves the specification, design, construction and verification of large software systems. This degree programme is designed for computing science students who wish to pursue careers as professional software engineers in industry and commerce.

Programme structure

Year 1
In your first year you will take an introductory programming course that emphasises the principles of programming and a course on computing fundamentals.

You will also study two other subjects of your choice in year 1 – www.glasgow.ac.uk/ug/aboutdegrees.

Year 2
In your second year you will study Java programming, object-oriented software engineering, data structures and algorithms, algorithmic foundations, computer systems and information management.

You will also study one or two other subjects in year 2 – www.glasgow.ac.uk/ug/aboutdegrees.

Years 3 and 4
If you progress to Honours (years 3 and 4), you will study courses which present a practical, design-oriented approach to computing. These courses cover software engineering itself and related topics such as databases, human-computer interaction and real-time systems. You will also take a particular set of courses in your final year.

Practical work is an essential part of the degree programme and in third year you will take part in a software engineering team project.

Fourth-year individual projects have a software engineering focus. These practical projects carry considerable weight in the final assessment.

Year 5
Software Engineering can be taken as an MSci, which includes an additional year. Students on the MSci programme follow the BSc Honours degree programme up to the end of their fourth year of study. This is followed in fifth year by additional advanced modules and a substantial research-oriented project.

Partnership and industry links
The School of Computing Science enjoys excellent industrial links which lead to exciting, substantial work placements. You will undertake a summer placement of at least ten weeks’ duration, between third and fourth years, which provides valuable work experience.

Our international links
Students who wish to study abroad usually do so during their second year and we have exchange agreements in place with a variety of internationally leading universities across Europe. You can also spend a year abroad in North America, Australasia or at strong universities in any other country.

Career prospects
Our graduates often work in the IT department of a large company or in a consultancy which provides project teams to work with other companies. There are also challenging opportunities for software engineers to work in small start-up companies developing innovative products.

You may also be interested in
- Computing Science
- Electronic & Software Engineering
- Mobile Software Engineering
- Neuroinformatics (Computing Science & Physiology)

Degrees and UCAS codes
BSc (Hons) (G430) – four years
MSci (G610) – five years

Accreditation
Honours graduates are eligible for membership of the British Computer Society (MBCS) and, after relevant industrial experience, they can apply to become Chartered IT Professionals (CITP).

Entry requirements
BSc, MSci
Highers: AAAA or AAABB (including two science subjects) in first sitting = unconditional offer.

Applicants who achieved AAAB or AABBB (including two science subjects) at their first sitting WILL receive an offer from the University. This offer may be conditional (on second sitting results) or unconditional, depending on how many applications are received from students who have attained these grades.

Additional offers, either conditional or unconditional, MAY be made to applicants who achieved between ABBB and AABB (including two science subjects) at their first sitting. A decision re these applications will be made in March 2014 once all applications have been reviewed.

Applicants who receive an offer conditional on second sitting results will be required to study Advanced Highers in relevant subjects as an integral part of their conditional offer.

A-levels: AAB, including two science subjects. Normally have A-level Mathematics at B or above.

IB: A minimum of 34 points is required to be considered for an offer. Actual offers will specify subjects and grades to be attained at Higher Level.

For a full list of alternative qualifications please see www.glasgow.ac.uk/undergraduate/entryrequirements.

Advanced entry
If you have exceptional A-level or Advanced Higher grades it’s possible to follow a faster route, which allows you to complete a standard BSc (Hons) or MSci degree in one year less than usual – see www.glasgow.ac.uk/undergraduate/degrees/advancedentry.

E: compsci-advice@glasgow.ac.uk
W: www.glasgow.ac.uk/ug/softwareengineering
The city of Glasgow

- The UK’s **3rd largest** city and one of the world’s **top** student cities
  
  (QS Best Student Cities 2012)
- Lively nightlife with more than **700** bars, pubs and nightclubs and **7** cinemas, including the tallest cinema in the world
- More than **20** museums and art galleries, including **Kelvingrove Art Gallery & Museum** and the **Gallery of Modern Art**
- Known as ‘**dear green place’** with over **90** parks and public gardens
- Host of the **MOBO awards x 2** plus over **10** different festivals each year
- UK’s first **UNESCO City of Music**, host to around **130** music events every week
- **Largest** retail centre in the UK outside London with everything from high street favourites to independent and vintage stores
- **Commonwealth Games** host 2014
- Excellent sports facilities including wall climbing venues, indoor and outdoor ski slopes and the **Sir Chris Hoy Velodrome**.

‘Glasgow is one of Britain’s urban gems.’
James Bainbridge, Author, Lonely Planet’s Study Glasgow

Follow Glasgow on Facebook, Twitter and YouTube: www.glasgow.ac.uk/interact

Discover the city with your free Glasgow App. Search ‘Glasgow’.

© University of Glasgow, May 2013. Produced by Corporate Communications, University of Glasgow. Printed by the Print Unit. University of Glasgow charity no: SC004401.