

Computer Science

 GUARDIAN UNIVERSITY GUIDE 2020
9TH IN THE UK FOR COMPUTER SCIENCE

 NSS 2018
TOP 5 IN THE UK FOR LEARNING
RESOURCES IN COMPUTER SCIENCE

 DLHE 2016/2017
£29,900 AVERAGE MEAN SALARY OF GRADUATES





Why Computer Science?

Computer Science is a rapidly evolving and increasingly important field, pervasive in almost all areas of science and modern day life. Computer Science graduates are therefore in high demand across an increasingly diverse range of industries.

At Loughborough University, the Department of Computer Science has been equipping students with the cutting edge skills and knowledge needed to work in this constantly advancing field since 1974. Based centrally on campus, the Department offers a stimulating learning environment that boasts state-of-the-art lab facilities, study areas and seminar rooms, and ongoing investment in resources.

Our students benefit not only from excellent facilities and world-class cutting edge research carried out by staff, but from our enviable international industry links. Our Industry Liaison Committee represents leading UK and international companies and provides regular input to curriculum development, career advice to students and additional teaching resources.

These links with industry ensure the Department of Computer Science sits at the forefront of technological development – and also provide early opportunities for students to secure employment. The demand for our graduates is high across a diverse range of industries, as is reflected by their continued success and consistently high starting salaries.

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DHLE 2016/17
95% OF GRADUATES
IN EMPLOYMENT AND/
OR FURTHER STUDY
WITHIN SIX MONTHS*



SEVERAL COURSES
ACCREDITED BY THE
BRITISH COMPUTER
SOCIETY (BCS)



GUARDIAN UNIVERSITY
GUIDE 2020
UNIVERSITY
RANKED 4TH

Outstanding facilities

The Department of Computer Science is based in the University's Haslegrave building and provides an excellent environment in which to study, boasting state-of-the-art facilities and teaching resources.

In addition, as a Loughborough student, you will have access to the wide-ranging high quality facilities on campus, including round-the-clock access to computer labs and our extensive computer library resources.



Your Computer Science department

As a student within the Department you will have access to six computer laboratories for the use of School of Science students that feature triple boot (Windows/Linux/macOS) computers.

In addition, our labs offer 24-hour access for students, as well as support from a team of systems specialists.

The building also provides modern study rooms, seminar rooms and specialist labs for student project work on hardware and robotics.

Ongoing investment has seen our new robotics lab open recently, featuring advanced robotics equipment including a pair of Aldabaran Robotics NAO robots. The lab is used to conduct cutting edge research into robotic programming using deep learning AI techniques. The lab is equipped with testing facilities designed to explore the future potential for robotics in society. The NAO robots build on our existing complement of robotic equipment which includes a number of quadcopters, robotic animals and E-Pucks.

As a Loughborough University computer science student, you will have access to our peer mentoring scheme. There to provide encouragement, advice and signpost you to relevant staff and services, your peer mentor will support your transition into university life.

Women in Computer Science

Loughborough University holds the Athena SWAN Bronze award, recognising its commitment to improving the representation and career progression of women in STEM (science, technology, engineering and mathematics) subjects.

The Department of Computer Science is committed to creating a diverse and inclusive culture in which students are able to thrive, regardless of their gender. As a Loughborough University computer science student you will be invited to attend the annual Claudia Parsons lecture – our yearly celebration of women in STEM. You will benefit from the support of our peer mentoring scheme and have the opportunity to attend Women in Computer Science events all over the country.

You will also be encouraged to take part in outreach activities and may be invited to work as an ambassador at open days, inspiring prospective students just like you.

—
“Everyone is really friendly and encourages you to participate in the different clubs the University has on offer. Being part of the Afro-Caribbean Society (LSU ACS) has been a great way to interact with people from a similar culture. Being at Loughborough is such a great environment to be in.”

—
 Lizz
 BSc Computing and Management

Our courses

Our undergraduate courses are informed by industry needs and give students a thorough grounding in the fundamentals of computing, as well as transferable skills in problem-solving and project work. In addition to the academic content of our degree courses, emphasis is placed on the development of your personal, managerial and presentation skills.

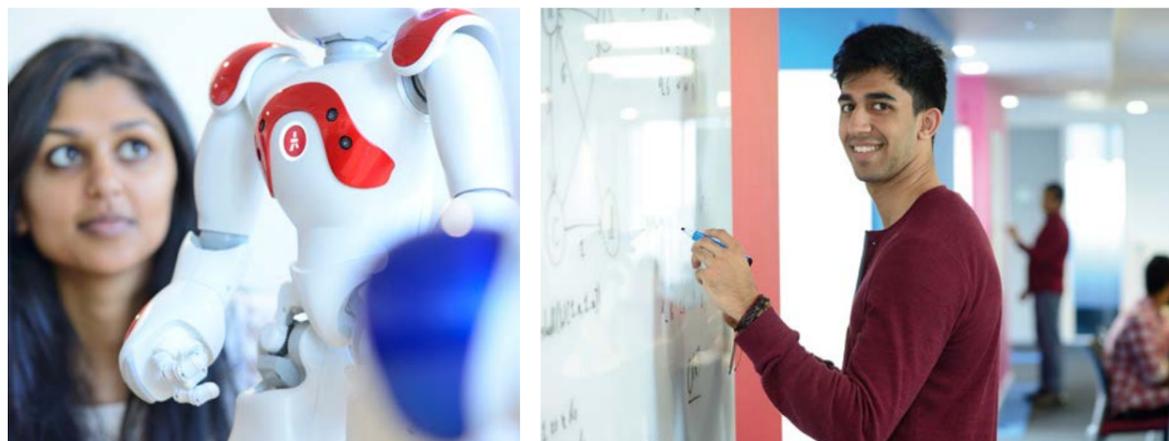
We continually monitor course content for quality and make improvements based on feedback from students, senior industrialists and accrediting bodies such as the British Computer Society. Major companies are directly involved in sponsoring our modules, supporting project work, and providing guest lectures and prizes. Several of our BSc and MSc courses are accredited by the British Computer Society (BCS).

The courses we offer are:

Computer Science
Computer Science and Artificial Intelligence
Computing and Management
Computer Science and Mathematics
Information Technology Management for Business
Computer Science with a Foundation Year

The MSci degree

The Masters in Science (MSci) provides ideal preparation for research and development work in industry or a PhD. They are designed to create leaders in the subject area by giving in-depth experience of cutting-edge research.



Computer Science

MSci (Hons) DPS* 5 years full-time sandwich
UCAS code: G403

MSci (Hons) 4 years full-time
UCAS code: G402

BSc (Hons) DPS* 4 years full-time sandwich
UCAS code: G401

BSc (Hons) 3 years full-time
UCAS code: G400

Typical offers

A level: AAA (MSci) / ABB (BSc) including Mathematics (or AAA (MSci) / ABB (BSc) plus AS level Mathematics at Grade A)

IB: (MSci) 37 (6,6,6 HL) / (BSc) 34 (6,5,5 HL) including HL Mathematics

BTEC: BTEC Level 3 National Extended Certificate/National Diploma: (MSci) D* plus Grades AA in 2 A-Levels including Maths/(BSc) D plus grades AB in 2 A-Levels including Maths or BTEC Level 3 National Diploma: D*D* plus grade B in A-Level Maths

GCSE: Minimum 5 GCSEs Grades A*-B (9-6) including Mathematics



Computer science is a rapidly evolving and increasingly important field, pervasive in almost all areas of science and modern day life. Our Computer Science course is firmly grounded in theory and practice, with a strong emphasis placed on logic, programming and mathematical ability. The course can be tailored to a variety of career paths via the choice of specialist modules.

This course provides a strong foundation in the critical areas of the subject whilst also giving the opportunity to tailor the degree to your strengths, interests and career aspirations via the choice of specialised modules and project work, taught and supervised by world leading experts.

The British Computer Society (BCS) has granted accreditation of this course. Please consult the online prospectus for details.

"I love how we don't just focus on programming. We are taught a wide range of skills ranging from technological to business. I think this makes us well rounded people, who can hopefully do anything!"

Jonathan
 MSci Computer Science

Computer Science and Artificial intelligence

Computer Science and Artificial Intelligence

MSci (Hons) DPS* 5 years full-time sandwich
UCAS code: GGK7

MSci (Hons) 4 years full-time
UCAS code: GG4R

BSc (Hons) DPS* 4 years full-time sandwich
UCAS code: GG47

BSc (Hons) 3 years full-time
UCAS code: GG4T

Typical offers

A level: AAA (MSci) / ABB (BSc) including Mathematics (or AAA (MSci) / ABB (BSc) plus AS level Mathematics at Grade A)

IB: (MSci) 37 (6,6,6 HL) / (BSc) 34 (6,5,5 HL) including HL Mathematics

BTEC: BTEC Level 3 National Extended Certificate/National Diploma: (MSci) D* plus Grades AA in 2 A-Levels including Maths/(BSc) D plus grades AB in 2 A-Levels including Maths or BTEC Level 3 National Diploma: D*D* plus grade B in A-Level Maths

GCSE: Minimum 5 GCSEs Grades A*-B (9-6) including Mathematics



Artificial Intelligence is arguably one of the most rapidly growing and exciting fields of technological development of our generation with far-reaching potential to solve present day problems – and to transform the world around us.

Artificial Intelligence (AI) is the science of mimicking human intelligence inside a computer, and our Computer Science and Artificial Intelligence course is a computing degree that enables specialism in AI through project work and specialist AI modules. It contains broad coverage of all major Computer Science topics as well as specialist modules in artificial intelligence, taught by world leading experts from our Vision, Autonomous and Human-Computer Systems research group. Our research constantly feeds into our teaching curriculum meaning you will learn cutting edge techniques whilst studying this topic.

The British Computer Society (BCS) has granted accreditation of this course. Please consult the online prospectus for details.

 www.lboro.ac.uk/compsci

Computing and Management

MSci (Hons) DPS* 5 years full-time sandwich
UCAS code: GNL2

MSci (Hons) 4 years full-time
UCAS code: GN4F

BSc (Hons) DPS* 4 years full-time sandwich
UCAS code: GN42

BSc (Hons) 3 years full-time
UCAS code: GNK2

Typical offers

A level: AAA (MSci) / ABB (BSc)

IB: (MSci) 37 (6,6,6 HL) / (BSc) 34 (6,5,5 HL)

BTEC: BTEC Level 3 National Extended Certificate/National Diploma: (MSci) D* plus Grades AA in 2 A-Levels/(BSc) BTEC Level 3 National Extended Diploma in Computing or IT or a related subject: D*D*D*

GCSE: Minimum 5 GCSEs Grades A*-B (9-6) including Mathematics



This degree course provides an excellent preparation for a challenging and rewarding career, offering a high level of knowledge and practical skills in both Information Technology (IT) and management. Graduates possessing these 'hybrid' skills are highly sought after in industry.

The course is approximately evenly divided between IT and management subjects and is taught in conjunction with the highly-rated School of Business and Economics.

The Computing and Management degree and Information Technology Management for Business (ITMB) degree are very similar with most taught modules being common to the two courses.

The Computing and Management BSc (Hons) degree has partial accreditation for Chartered IT Professional status (CITP) from the British Computer Society.

The essential difference is that the ITMB course is specified and endorsed by the companies of Tech Partnership Degrees. The strength of the Computing and Management course however is that it allows for more flexibility when choosing the project in Year 3/4.

Information Technology Management for Business

MSci (Hons) DPS* 5 years full-time sandwich
UCAS code: G500

MSci (Hons) 4 years full-time
UCAS code: G501

BSc (Hons) DPS* 4 years full-time sandwich
UCAS code: GN51

BSc (Hons) 3 years full-time
UCAS code: GN52

Typical offers

A level: AAA (MSci) / ABB (BSc)

IB: (MSci) 37 (6,6,6 HL) / (BSc) 34 (6,5,5 HL)

BTEC: BTEC Level 3 National Extended Certificate: (MSci) D* plus Grades AA in 2 A-Levels/(BSc) BTEC Level 3 National Extended Diploma in Computing or IT or a related subject D*D*D*

GCSE: Minimum 5 GCSEs Grades A*-B (9-6) including Mathematics



The Information Technology Management for Business (ITMB) course has been designed in partnership with some of the world's leading employers to prepare students for a successful career in IT. The course enables students to gain practical experience working on real world business challenges and is taught in conjunction with the highly-ranked School of Business and Economics, providing experienced teaching and support.

The course is supported by a partnership of leading industry employers including BA, BBC, BT, The Cabinet Office, Cisco, Deloitte, Ford, Fujitsu, HP, IBM, ITV, LogicaCMG, The Met Office, Morgan Stanley, Norwich Union, Royal Bank of Scotland, Sainsbury's, Symantec and Unilever.

The Information Technology Management for Business degree is accredited by Tech Partnership Degrees on behalf of the industries it represents. The BSc course also has partial accreditation from the British Computer Society for Chartered IT Professional status.

Computer Science and Mathematics

MSci (Hons) DPS* 5 years full-time sandwich
UCAS code: GG11

MSci (Hons) 4 years full-time
UCAS code: GGK1

BSc (Hons) DPS* 4 years full-time sandwich
UCAS code: GG4D

BSc (Hons) 3 years full-time
UCAS code: GG4C

Typical offers

A level: AAA (MSci) / ABB (BSc) including Grade A in Mathematics

IB: (MSci) 37 (6,6,6 HL) / (BSc) 34 (6,5,5 HL) with 6 at HL Mathematics

BTEC: BTEC Level 3 National Extended Certificate/National Diploma: (MSci) D* plus Grades AA in 2 A-Levels including Maths/(BSc) BTEC Level 3 National Extended Certificate: D plus grades AB in 2 A-Levels including grade A in Maths or BTEC Level 3 National Diploma: D*D* plus grade A in A-Level Maths

GCSE: Minimum 5 GCSEs Grades A*-B (9-6) including Mathematics



Many real-world problems are solved by a close-knit combination of mathematical and computational techniques. This degree course aims to equip students with a powerful skills-set to deal with such tasks, which also provides an excellent grounding for any career in either computing or mathematics.

The course is divided equally into topics from computer science and mathematics, and is taught in conjunction with the Department of Mathematical Sciences, so that graduates have a wide range of experience in both areas.

The core computer science subjects studied in the first two years have a particular emphasis on mathematical aspects of computer science. The third year of our Computer Science and Mathematics degree involves a project and a range of optional modules in both subjects. The MSci year provides a broad understanding and study of entrepreneurship, further in-depth mathematical modelling and a significant, research-based individual project conducted with a member of academic staff.

Computer Science with a Foundation Year

UCAS code: G404

Computer Science with a Foundation Year is for candidates who for some reason have not had the opportunity to study the pre-requisite subjects needed for first year entry. Offers will not normally be made to those who apply simply because their A level grades/predictions are below the requirements for direct entry.

Successful completion of the one year Foundation course allows you to progress onto any of the courses in our Department.

www.lboro.ac.uk/foundation

For more information about all our courses, including modules, please visit the online prospectus:

www.lboro.ac.uk/study/undergraduate/courses/study-areas/computer-science

Placements and careers

All our degree courses are informed by our Industrial Liaison Committee, which represents leading UK and international companies and provides input to curriculum development. The committee also helps us provide career advice to students and additional resources for teaching.

Our strong industry links help us deliver one of the strongest placement schemes in the country.

Outstanding placement opportunities

All our courses carry the option of a year-long placement and we have been highly successful at helping our students find placements within major IT and business sector companies.

Recent placement destinations include:

- Barclays Capital
- CERN
- Hewlett Packard
- IBM
- Mars
- Microsoft
- Morgan Stanley
- Renault F1
- 3COM



Watch our placement video here:
www.lboro.ac.uk/departments/compsci/undergraduate/industrial-placement/

“Loughborough University has inspired me in many ways. The Career Network has given me confidence in finding a job; the extra-curricular activities (such as committees, programme representing and volunteering) have improved my communication and networking skills. Finally, my lecturers have motivated me to focus on my ambitions. Collectively, these have inspired and developed me so much over the past four years.”

—
 Abhishek
 MSci Computer Science and Artificial Intelligence



Excellent career prospects

95% of our graduates were in employment and/or further study within six months of graduation (DLHE 2016/17). The employment level of our graduates is consistently higher than the national average and is reflected by their exceptionally high average starting salary of over £29,950.

Here are some of the jobs our graduates have:

- Analyst/Software Engineer, Accenture
- IT Graduate, Aston Martin
- IT Consultant, BBC
- Project Manager, Dyson
- Project Support Officer, The Tech Partnership
- IT Systems Analyst, GlaxoSmithKline
- Technical Consultant, Microsoft
- Mobile Web Developer, Netplay TV
- Risk & Implementation Analyst, Santander
- Business Technology Graduate, Siemens
- Future Leaders Programme, Unilever
- Business Analyst, William Hill



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UNIVERSITY
OF THE YEAR



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This brochure was written several months in advance of the academic year to which it applies (2020). Every effort has been made to ensure that the information contained within is accurate at the time of publishing, but updates (for example to course content) are likely to occur due to the time between publication and the course start date. It is therefore important to visit our online prospectus at www.lboro.ac.uk/study before applying to check for any updates, as this will be the most up-to-date repository of information.



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