



**Northumbria  
University**  
NEWCASTLE

Newcastle  
London  
Amsterdam



# Computer Science with Advanced Practice MSc

Postgraduate | 2 year full-time | Full Time | Computer and Information Sciences

City Campus, Northumbria University | Newcastle

Start January 2023 or September 2023 or January 2024

# Computer Science with Advanced Practice MSc

## About this course

We are currently reviewing modules which provide opportunities to work with industry to gain real experience. Modules will be updated in due course.

Are you excited by the impact of technology on our everyday lives and keen to forge a successful career in the field? From day one, you will be immersed in an exciting, innovative environment where you will develop broad knowledge and skills in the main areas of computing and information technology which will be directly relatable to your future career.

You will take core modules covering areas of computing in programming, databases, systems analysis and design, and computer networks and web development. Designed in consultation with partners from industry, you will develop the most up-to-date computing knowledge, desired by employers across the industry.

In the second year, for one semester, you will have the chance to study in another country or join a research group. This valuable experience will enhance your employability and further develop your theoretical and practical skills.

## Research

If you take this option, you will be assigned to our Computer Science and Informatics Research Group. There is every possibility that you may contribute to published research and therefore you may be named as part of the research team, which would be a great start to a research career.

Accredited by [BCS](#), The Chartered Institute for IT for the purposes of partially meeting the academic requirement for registration as a Chartered IT Professional.

*Do you already have an undergraduate degree in a computing-related subject? [MSc Advanced Computer Science](#) is the course you'll need to take your knowledge to the next level.*

## Modules & Learning

**On this course, you will have the opportunity to independently research topics to deepen your learning and understanding, while learning the skills to communicate your research and investigations.**

Assessment methods will include reports, presentations, individual, group and project work, alongside regular feedback on your summative assessment.

The Advanced Practice semester will be assessed via a report and presentation about your study abroad or research group activities.

Our experienced staff will be assigned to you on an 1-1 basis to support your chosen research topic towards the end of the programme. You will be taught through a range

of lectures, seminars, tutorials and workshops. Throughout the programme, there is an emphasis upon self-directed learning, critical thinking, and independent research to support your academic and personal development.

## Teaching Staff

**You will be taught by a range of academic staff who bring a wealth of professional experience. They are experts in specialist areas such as Strategic Management, Computer Science and Web Based Information Retrieval.**

In a dynamic learning environment with an expert team of staff, you will be taught theoretical and practical research skills such as information literacy, as well as problem solving skills, self-directed learning and communication skills.

For this full time Master's programme, you will have approximately 13 hours of teaching time per week in Year One. Class time can occur anytime between 9am-6pm, Monday to Friday (exact timetables will be finalised in early September).

## Facilities

**Throughout the duration of your course you will have access to our state-of-the-art facilities including our dedicated computing suite, Pandon Basement.**

Pandon Basement houses specialist facilities and studios with industry-standard software.

You will also have access to dedicated computing areas, which can be used during free periods and into the evenings and weekends.

In addition to direct academic assistance, you will have access to a variety of learning support options. Workshops led by library experts will teach you how to correctly reference sources and enhance your academic writing skills. The electronic learning portal will also provide you with access to a selection of online support materials, including Blackboard Ultra.

## Research-rich Learning

**You will be immersed in a research-rich environment supported by our rapidly expanding Computer Science and Information Science Research Groups.**

Northumbria's MSc has been designed to ensure you learn the most up-to-date computing knowledge required by employers across the industry. We offer research-informed teaching, industry-standard software and a strong community of like-minded students.

You will be taught by staff with a strong academic background in areas such as Web Programming who promote innovative and excellent learning and teaching practice.

You will develop an understanding of important research

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methods and approaches which could be directly applicable to the demands of your future career.

## Your Career

**Industry practice has strongly influenced the design of the programme to give you the computing knowledge to work within a variety of roles in the sector.**

Learning independently, working collaboratively on projects, evaluating and reflecting upon practitioner experience, are all essential skills of the computing profession. Your modules will enable you to do all of this and more as you develop the qualities needed for a career in computing.

The Advanced Practice semester will help you develop a track record of achievement that will help you stand out from other job applicants.

A two-year Masters course, like this one, will carry particular weight with employers. They'll understand that you'll have a deeper understanding of topics as well as more hands-on practical experience.

Upon graduating from this course, you will have an in-depth knowledge and critical understanding of the main areas of Computing and Information Technology, including the key areas of systems analysis, systems development, operating systems, networking, databases and the internet.

We place a real emphasis on developing the transferable skills that will open doors to a range of careers. These include communication, analytical and problem solving skills, technical skills and the ability to work independently and as part of a team.

Graduates are expected to work in a number of career opportunities across a wide range of computer areas including software engineering, systems analysis and design, computer networks, database development and management, software testing and project management.

## Who would this course suit?

Do you enjoy getting 'hands on' with technology? If you are looking for a career within a computing field but have an undergraduate degree in another subject, MSc Computer Science is the perfect course for you.

## Entry Requirements 2022/23

### Standard Entry

**Applicants should normally have:**

A minimum of a 2:2 honours degree in any subject. Other subject qualifications, equivalent professional qualifications and/or relevant work experience will be considered on an individual basis.

### International qualifications:

If you have studied a non UK qualification, you can see how your qualifications compare to the standard entry criteria, by selecting the country that you received the qualification in, from our country pages. Visit [www.northumbria.ac.uk/yourcountry](http://www.northumbria.ac.uk/yourcountry)

### English language requirements:

International applicants are required to have a minimum overall IELTS (Academic) score of 6.5 with 5.5 in each component (or approved equivalent\*).

\*The university accepts a large number of UK and International Qualifications in place of IELTS. You can find details of acceptable tests and the required grades you will need in our English Language section. Visit [www.northumbria.ac.uk/englishqualifications](http://www.northumbria.ac.uk/englishqualifications)

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# Computer Science with Advanced Practice MSc

## Module Overview

Year 1	
KC7013	Database Modelling
KF7006	Object Oriented Programming
KF7011	Systems Analysis & Design with UML
KF7013	Website Development and Deployment
KF7023	Computer Networks & Operating Systems
KF7028	Research Methods and Project Management
KV7001	Academic Language Skills for Computer and Information Sciences
Year 2	
KF7029	MSc Computer Science & Digital Technologies Project
KV7007	Advance Practice semester

## Finance

### Financial Support

Northumbria University is committed to supporting our students. We offer scholarship packages for students depending on their abilities.

You can find out more information on our individual packages at [www.northumbria.ac.uk/study-at-northumbria/fees-funding/pg-fees-funding](http://www.northumbria.ac.uk/study-at-northumbria/fees-funding/pg-fees-funding)

Financial support opportunities have associated eligibility conditions, therefore it is essential applicants consider all requirements and observe the application process and deadlines.

## Other Additional Costs

### Accommodation Costs

Many students find that staying in University accommodation enhances their student experience, and Northumbria has a fantastic selection available for you. Visit our [accommodation pages](#) to investigate your options for living and studying in Newcastle. All costs incurred are optional and students should select the most appropriate accommodation for their needs.

### Disability Support

In order to access disability or dyslexia support, students may be required to provide evidence of their disability. This evidence is often provided by an external body (for

example, by a medical specialist or GP) and these external bodies may charge for providing this evidence. Also, if a disabled student is eligible for DSA funding for computer equipment, depending on their funding body, the student may be required to make a contribution of £200 towards the cost of any computer equipment. For more information about how to access disability support, contact [Student Life and Wellbeing](#).

### Healthcare Costs

Students, depending on their circumstances, may incur some charges for accessing healthcare or medication from the National Health Service. These include charges for prescriptions, charges for dental checks and treatment, and charges for other services, such as providing vaccinations or for certain types of medical evidence (for example, evidence to support a Personal Extenuating Circumstances/PEC claim at the University, if required). These charges are set and charged by NHS services, rather than by the University, and will be subject to change.

Certain applicants who apply for a UK visa will pay an Immigration Health Surcharge. International students from particular countries may also be required to pay to have a tuberculosis (TB) test.

We also strongly recommend that all EU and international students take out their own insurance policy to cover costs which are not met by the National Health Service. It is your responsibility to ensure you pay for adequate insurance cover for the duration of your stay in the UK.

For more information about healthcare-related charges in the UK, you can speak to the [Welfare, Immigration and Funding team](#) based in Student Life and Well-being.

### Congregation Costs

When you graduate you will be invited to attend your graduation ceremony. Free tickets will be provided to the Graduate and two guests. Congregation ceremonies also have associated costs. To take part you will be required to hire a graduation gown and cap\* You may also wish to purchase a professional photograph or additional guest tickets. To give you an approximation of costs, for students graduating in 2022/23, the price of an additional guest ticket was £15.00. Please note, these are subject to availability. Please also be aware that the associated costs of graduation ceremonies are subject to review each year. \*Gown hire and photography are purchased from external providers, therefore the University cannot demonstrate prices.

### Library Costs

Your University Library provides a postal service for books and journal articles which will be sent world-wide to Northumbria students who are studying part-time, by distance learning or are work based learners. Students who are placement for more than six week are eligible to use the service whilst on placement.

There is no charge for posting books out, but you will be required to pay the cost of any return postage. We



recommend that items are returned by recorded delivery. You can of course, return books in person to either University Library campus.

Overdue charges apply to all library loans to encourage you to return items on time when they have been recalled for use by another reader. Loan renewal is automatic for up to four months or until another reader requests that item. Charges are entirely avoidable by returning items on time, but where incurred will vary according to loan status and the length of time an item is overdue. Overdue charges exist to ensure the Library Collection benefits the whole student community.

Library books which have been lost or damaged beyond repair will be charged at the replacement cost of the item and a non-refundable handling charge.

If you lose your University smart card there is a replacement charge of £10 to obtain a new one. This cost is waived if your smart card has been stolen and you can provide a police crime reference number.

### Placement Costs

Placements in industry are a core element of many of Northumbria's courses. Whilst many of these placements are optional, some are mandatory. They offer you a great opportunity to gain hands-on experience, giving you a distinct edge in the job market. To undertake a placement, you will need to budget for any accommodation and travel charges.

### Printing & Photocopying Costs

Students will receive a printing credit of £10 in 2022/23 and 2023/24\*. This will provide 1,000 pages of A4 single-sided black and white printing. Any additional printing is paid for by the student.

### High Quality HP Printers (available for Students in the Faculty of Arts, Design and Social Sciences only)

High Quality Printing is available in:

- Charges for High Quality Printing
- 30p: Single sided A3 print. 120gsm colotech+ paper
- 15p: Single sided A4 print. 120gsm colotech+ paper

You can top up your Print Credits Online, whenever you like. Click the Print Balance > Buy Credits button in this Student Portal or logon at [www.northumbria.ac.uk/payforprinting](http://www.northumbria.ac.uk/payforprinting). Print credits will show on your account in 5-10 minutes.

To print to these printers:

Use the Student Desktop PCs and Apple Macs in Squires Workshop and City Campus East School of Design to print to these printers:

- Select the 'Print Queue' - When picking the printer to use, look for the colour devices on NINGWOOD
  - a) HP E85055 HQ Col Printer A3 on Ningwood
  - b) HP E85055 HQ Col Printer A4 on Ningwood

Send your work to the printer and use your University

Smartcard to swipe release your print.

*\*Newcastle and London campus only. Amsterdam endeavours to be a paperless campus and printing of submission is not required. Costs at Newcastle Campus may be subject to change for 2023/24.*

### Visa Costs

International students will be required to pay visa application fees, and associated fees as required - such as the Immigration Healthcare Surcharge, Tuberculosis tests, fees to renew or extend a visa, and fees associated with appealing a visa/immigration decision. These fees are set and charged by the UK government, rather than by the University, and are subject to change. More information about these fees can be found on the [UK Government's website](#), and information about applying for a visa to study at Northumbria can be found on our [here](#).

### Useful Links

[www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/pfna-accordions/](http://www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/pfna-accordions/)

### Tutor Profiles

[www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/tutor-profiles/](http://www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/tutor-profiles/)

[www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/book-an-open-day/](http://www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/book-an-open-day/)

[www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/facilities-pods/](http://www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/facilities-pods/)

[www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/links/](http://www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/links/)

[www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/main-images/](http://www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/main-images/)

[www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/research-pods/](http://www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/research-pods/)

[www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/staff-profile-pods/](http://www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/staff-profile-pods/)

[www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/student-profile-pods/](http://www.northumbria.ac.uk/study-at-northumbria/courses/msc-computer-science-with-advanced-practice-with-study-abroad-dtscsm6/student-profile-pods/)