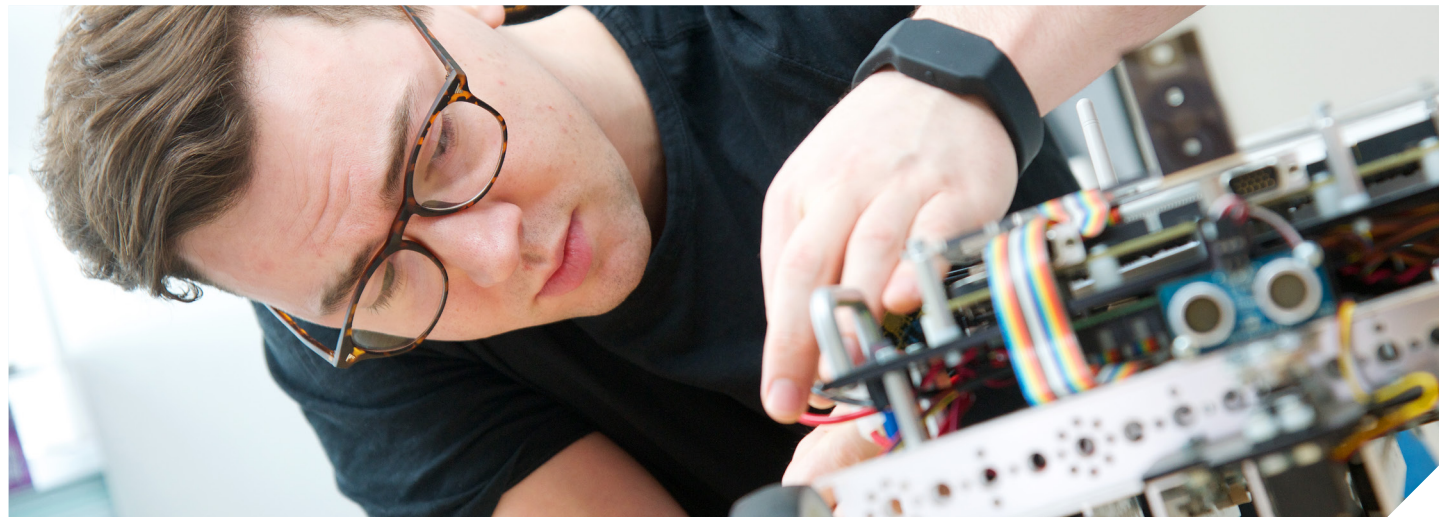


Computer Science with a Year in Industry BSc (Hons)

UCAS Code: I102 | Duration: 4 years | Full-time | Hope Park | 2024/2025

Placement year opportunities available



Course Overview

Computer Science is all about new ideas, new opportunities and fresh thinking. There is no other discipline that can be applied to so many different areas and have such a profound impact on all aspects of society. The dynamism of this exciting subject is reflected in this degree through the study of a range of topics including networks, robotics, the Internet, and mobile and embedded computing and cutting-edge technologies such as Artificial Intelligence, Virtual Reality and Augmented Reality. This degree includes a compulsory year in industry.

Study this degree with us and you will acquire practical skills that are highly sought after by industry, such as programming in C, C++, Java, Lua, Python, JavaScript and C#. Computer science-related jobs are not only appealing in their versatility, earning potential and demand, computer science has a wide-reaching social impact, posing many ethical questions, and these issues are examined at various points during the three years of study.

Whilst Computer Science is not only intellectually challenging, it will provide you with close academic support. All are research active and have a varied background in a diverse range of interests, and this enhances your experience by providing a rich curriculum with exposure to multiple approaches and areas of research. If you are enthusiastic, inventive and looking to shape the future, or if you're looking to leverage your love of technology to make a difference this degree is for you. Rest assured. Computer Science is an incredible career choice for someone who wants to change the world.

Entry Requirements

This course follows the standard University entry requirements. Please see the website for further information.

Fees and Additional Costs

The tuition fees for 2024/2025 are £9,250 for full-time undergraduate courses.

As well as tuition fees, you need to consider additional costs such as books, hardware and software for your own personal computer/laptop, general computer consumables such as discs, USBs and printing, which will be approximately £500.

You will also need to consider the cost of your accommodation each year whilst you study at university.

Visit our accommodation webpages for further details about our Halls of Residence: www.hope.ac.uk/halls

Applicants will need access to a computer if course delivery is switched to online. The University has a laptop lending service if remote study is necessary.



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Computer Science with a Year in Industry BSc (Hons) Curriculum

Year One

The first year provides a broad introduction to foundational computer science concepts across theoretical knowledge, problem solving, and practical skills. Course topics cover:

- Professional Skills to prepare for computer science learning and expectations.
- Structured Problem Solving methodologies, with a focus on Python programming.
- Database Technology fundamentals, from theory to practice.
- Python Programming principles and practical application.
- Website Development basics.
- Computer Systems foundations.

Through this diverse first year curriculum, students gain well-rounded exposure to key computer science areas. They apply theoretical knowledge in practical Python and web programming projects. Hands-on skills in these coding languages and environments equip them with computational problem solving abilities. The courses provide a strong base for computer science mastery in later years, whether on the computer systems or data engineering track.

Year Two

In your second year, you will go deeper into Computer Science, expanding into both its theoretical and practical dimensions.

Object-oriented Programming with C++

Dive into the intricacies of the C++ programming language, using it not just as a tool, but as a medium to master the overarching principles of object-oriented coding and design.

Professional Skills

This topic equips you with a diverse set of skills essential for the professional realm.

Software Engineering

While Java is the language of choice here, this course is about more than just coding. It emphasizes teamwork, diverse project management approaches, and acquaints you with the cutting-edge technologies prevalent in the industry.

Website Development

Building on your software engineering foundation, this topic looks into client-to server-side coding. You'll learn to integrate databases with websites, creating robust registration, login, and logout systems.

Networks

Dive into the world of computer network infrastructure and protocols.

Year Three

You spend your third year on a compulsory placement in industry.

Year Four

Your final year will focus on your dissertation in an area of your choice, along with topics such as:

Immersive technologies (VR/AR and MR)

You'll get hands-on with platforms like Unity and Unreal Engine, exploring both virtual and augmented realities.

Internet of Things (IoT)

You will learn how everyday objects can communicate over the internet and will have access to modern tools to develop and test your ideas.

Web Innovations

With a focus on advanced aspects of Javascript. You'll work with client-side applications using current libraries and explore server-side technologies like Node.JS and React.

Intelligent Systems

This course delves into artificial intelligence, starting with foundational machine learning models.

Mobile and Ubiquitous Computing

Here, you'll focus on mobile application development, primarily for Android. Using tools like Android Studio and the Java programming language, you'll create and refine mobile applications.

COURSE STRUCTURE

Teaching on this degree is structured into lectures, seminars and tutorials. You also have the opportunity to have a one-to-one meeting with your tutor each week. You spend your third year on placement.

In your first year of study you will have approximately 12 teaching hours per week, which reduces to approximately 11 hours in your second and fourth years.

On top of teaching hours, you are also expected to spend a number of hours studying independently each week, as well as working in groups to prepare for any group assessments you may have.

ASSESSMENT AND FEEDBACK

During your degree, there are a variety of assessment types including written exams, portfolios of tasks and activities, and practical coursework. In your final year, there is also a dissertation or extended research project to complete.

You will be given written feedback on your assessments, and you will have the opportunity to discuss this with your tutor in more detail.



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