## **Information Technology**

UCAS Code: Combined Honours only (please see website for details)

Duration: 3 years | Full-time | Hope Park | 2025/2026

Placement year opportunities available



## Course Overview

Information Technology is a rapidly changing and exciting subject. Organisations are increasingly relying on information technology to carry out key business functions. There is an explosion in the use of mobile devices to shop online and there is a high demand for skilled professionals who are able to effectively manage information systems. Well-designed software applications that are effective and usable is a crucial requirement for employers.

Our Information Technology degree prepares you to meet the needs of a wide range of organisations, emphasising the development of a variety of technologies, especially web and mobile technologies that are increasingly becoming a part of our everyday lives. During your studies, you will have opportunities to develop computational thinking and a systems approach to formulating, analysing and solving complex problems.

The degree is intellectually challenging and is taught by staff with a varied background and a diverse range of interests. Your student experience is enhanced by a rich curriculum that exposes you to multiple approaches to technological problems. Information Technology has a wide-reaching social impact, posing many ethical questions, and these issues are explored at various points during the degree.

## **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 2025/2026 are £9,535 for full-time undergraduate courses.

As well as your tuition fees, you will also need approximately £500 to purchase essentials such as textbooks, hardware, software and general computer accessories such as USB flash drives and printing.

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.



### CONTACT

T: +44 (0)151 291 3000 E: enquiry@hope.ac.uk www.hope.ac.uk

## **Information Technology**

## Curriculum

#### Year One

In your first year, you will develop the theoretical knowledge, problem solving and practical skills that underpin Information Technology. You study:

## Computing Principles & Professional Development

Professional Development prepares you for learning and study in an IT discipline and also introduces the fundamental practices, values and expectations of an IT professional.

#### **Programming Principles**

This block of study introduces the principles of algorithm design and programming, including an introduction to web development (HTML, CSS and Javascript).

#### **Database Technology**

You will not only learn how to properly implement databases using SQL, but how to design them from first principles, from conceptual through logical, then normalisation and physical design.

#### Year Two

In your second year, you will deepen your understanding of both the theoretical and practical facets of Information Technology, encompassing a range of specialised areas within the discipline. The topic you will study include:

## 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.

#### Website Development

Building on your software engineering foundation, this topic looks into client- to

server-side coding.

#### Algorithm Analysis and Design

This course will introduce you to the design, analysis, and implementation of algorithms, ensuring you can develop efficient and effective solutions to complex problems.

#### **Networks**

From understanding the roles of clients and servers to exploring physical media and the various types of networks, you'll gain insights into how data seamlessly travels across the digital realm.

#### Year Three

In your final year of your degree, the curriculum strongly reflects staff expertise and research interests, and you will develop a deeper understanding of the theoretical aspects of information technology. You study topics such as:

#### Web Innovations

Go beyond the basics and immerse yourself in the latest web technologies

#### IoT and Mobile development

You will study the internet of things, gaining practical experience using Lua and then look at mobile development for Android devices using Java.

#### Advanced database

We look at the disconnect between the object-oriented style of software development and the structure of relational databases.

#### Managing software deployment

We'll look at Linux server basics, and get practical experience of virtualization, enterprise containers, containerization, software orchestration and continuous integration and deployment using the school's teaching cluster.

#### Software Architecture

We'll look at reusable software patterns, and then look at modern software architectures, component based engineering, distributed engineering, service oriented engineering, systems engineering, and embedded systems.

#### **Cloud Computing**

You'll look at cloud computing and associated technologies such as Hadoop and Map Reduce.

## COURSE STRUCTURE

Teaching on this degree is structured into lectures, seminars and tutorials.

For the Information Technology part of your combined honours degree, there are approximately 6 teaching hours each week, which reduces to approximately 5 teaching hours in your second and third years.

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

## ASSESSMENT AND FEEDBACK

Throughout your studies, you will have a variety of assessments, including written exams, portfolios of tasks and activities, and practical coursework. Coursework is mainly project based, as this is the best way to develop the skills required in Information Technology.

In your final year, you undertake a major research project that gives you the opportunity to demonstrate your skills in an area that interests you.

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



T: +44 (0)151 291 3000 E: enquiry@hope.ac.uk www.hope.ac.uk