

Computer Science and Philosophy Information Sheet for entry in 2020

Artificial intelligence (AI), logic, robotics, virtual reality: fascinating areas where Computer Science and Philosophy meet. The two disciplines share a broad focus on the representation of information and rational inference, embracing common interests in algorithms, cognition, intelligence, language, models, proof and verification. Computer scientists need to be able to reflect critically and philosophically as they push forward into novel domains, while philosophers need to understand a world increasingly shaped by technology in which a whole new range of enquiry has opened up, from the philosophy of AI, to the ethics of privacy and intellectual property.

Some of the greatest thinkers of the past – including Aristotle, Hobbes and Turing – dreamed of automating reasoning and what this might achieve; the computer has now made it a reality, providing a wonderful tool for extending our speculation and understanding.

The study of Philosophy develops analytical, critical and logical rigour, and the ability to think through the consequences of novel ideas and speculations. It stretches the mind by considering a wide range of thought on subjects as fundamental as the limits of knowledge, the nature of reality and our place in it, and the basis of morality. Computer Science is about understanding computer systems at a deep level. Computers and the programs they run are among the most complex products ever created. Designing and using them effectively presents immense challenges. Facing these challenges is the aim of Computer Science as a practical discipline.

Both subjects are intellectually exciting and creative. The degree combines analytical and technical knowledge with rhetorical and literary skills, and the chance to study within two internationally acclaimed academic departments.

Computer Science and Philosophy can be studied for three years (BA) or four years (Master of Computer Science and Philosophy). Students do not need to choose between the three-year and four-year options when applying. Instead all students apply for the four-year course, and then decide at the start of the third year whether they wish to continue to the fourth year (which is subject to achieving a 2:1 at the end of the third year).

The first year covers core material in both subjects, including a bridging course studying Turing's pioneering work on computability and artificial intelligence. Later years include a wide range of options, with an emphasis on courses near the interface between the two subjects. The fourth year enables students to study a variety of advanced topics and complete an in-depth research project.



A typical week

For the first two years, your work is divided between about ten lectures and two to three college-based tutorials each week, alongside Computer Science practical classes – usually one session a week. In the second year you will take part in a Computer Science group design practical, many of which are sponsored by industry. In your third and fourth years, Philosophy continues to be taught through tutorials, while there are classes in the department for most Computer Science courses.

Most tutorials, classes, and lectures are delivered by staff who are tutors in their subject. Many are world-leading experts with years of experience in teaching and research. Some teaching may also be delivered by postdoctoral researchers or postgraduate students who are studying at doctorate level.

To find out more about how our teaching year is structured, visit our [Academic Year](#) page.

Course structure

YEAR 1	
<p>COURSES</p> <ul style="list-style-type: none"> • Computer Science: <ul style="list-style-type: none"> ○ Functional programming ○ Design and analysis of algorithms ○ Imperative programming ○ Discrete mathematics ○ Probability • Philosophy: <ul style="list-style-type: none"> ○ General philosophy ○ Elements of deductive logic ○ Turing on computability and intelligence 	<p>ASSESSMENT Five written papers</p>
YEAR 2	
<p>COURSES</p> <ul style="list-style-type: none"> • Computer Science core courses (25%): <ul style="list-style-type: none"> ○ Models of computation ○ Algorithms ○ Group design practical • Computer Science options (25%): Current options include: <ul style="list-style-type: none"> ○ Compilers ○ Databases ○ Artificial intelligence • Philosophy (50%): Current options include: <ul style="list-style-type: none"> ○ Knowledge and reality ○ Early modern philosophy ○ Philosophy of science ○ Philosophy of mind ○ Ethics 	<p>ASSESSMENT Two Computer Science papers</p>
YEAR 3	
<p>COURSES</p> <ul style="list-style-type: none"> • Computer Science (25–75%): Current options include: <ul style="list-style-type: none"> ○ Computational complexity ○ Machine learning ○ Computer-aided formal verification 	<p>ASSESSMENT Between nine and eleven three-hour written papers, including at least two in Computer Science and at least three in Philosophy</p>

<ul style="list-style-type: none"> ○ Computers in society ○ Knowledge representation and reasoning • Philosophy (25–75%): Current options include: <ul style="list-style-type: none"> ○ Philosophical logic ○ Philosophy of cognitive science ○ Philosophy of mathematics ○ Philosophy of logic and language and many others 	
YEAR 4	
<p>COURSES</p> <ul style="list-style-type: none"> • Computer Science: Current advanced options include: <ul style="list-style-type: none"> ○ Advanced security ○ Automata, logic and games ○ Computational game theory ○ Computational learning theory ○ Concurrent algorithms and data structures ○ Quantum Computer Science ○ Optional Computer Science project • Philosophy: <ul style="list-style-type: none"> ○ Advanced options in Philosophy ○ Optional Philosophy thesis <p><i>The courses listed above are illustrative and may change. A full list of current options is available on the Computer Science website.</i></p>	<p>ASSESSMENT</p> <p>Computer Science: written paper or take-home exam; Philosophy: three-hour written paper and 5,000-word essay</p>

The University will seek to deliver each course in accordance with the descriptions set out above. However, there may be situations in which it is desirable or necessary for the University to make changes in course provision, either before or after registration. For further information, please see the University's Terms and Conditions.

Fees

These annual fees are for full-time students who begin this undergraduate course here in 2020.

Fee status	Annual Course fees
Home/EU	£9,250
Islands (Channel Islands & Isle of Man)	£9,250
Overseas	£36,065

Information about how much fees and other costs may increase is set out in the University's Terms and Conditions.

Please note that the course fees you pay include your fees for both University and college services and are divided between the University (including your department or faculty) and your college on a formula basis. More information is provided in your Terms and Conditions.

Additional Fees and Charges Information for Computer Science and Philosophy

There are no compulsory costs for this course beyond the fees shown above and your living costs.

Living costs

Your living costs will vary significantly dependent on your lifestyle. These are estimated to be between £1,135 and £1,650 per month in 2020-2021. Each year of an undergraduate course usually consists of three terms of eight weeks each but you may need to be in Oxford for longer. As a guide you may wish to budget over a nine-month period to ensure you also have sufficient funds during the holidays to meet essential costs.

Living costs breakdown

	Per month		Total for 9 months	
	Lower range	Upper range	Lower range	Upper range
Food	£270	£385	£2,430	£3,465
Accommodation (including utilities)	£630	£760	£5,670	£6,840
Personal items	£130	£245	£1,170	£2,205
Social activities	£45	£110	£405	£990
Study costs	£40	£95	£360	£855
Other	£20	£55	£180	£495
Total	£1,135	£1,650	£10,215	£14,850

In order to provide these likely living costs, the University and the Oxford University Students' Union conducted a living costs survey to complement existing student expenditure data from a variety of sources including the UK government's Student Income and Expenditure Survey and the National Union of Students (NUS). The likely lower and upper ranges above are based on a single student with no dependants living in college accommodation (including utility bills) and are provided for information only.

When planning your finances for future years of study at Oxford beyond 2020-21, you should allow for an estimated increase in living expenses of 3% each year.