UNDERGRADUATE ADMISSIONS AND OUTREACH
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Computer Science and Philosophy Course Information Sheet for entry in 2022

Artificial intelligence (AI), logic, robotics, modelling and understanding complex physical and social phenomena: these are 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 and ethics of AI to the place of computers and robots within society.

Some of the greatest thinkers of the past – including Aristotle, Hobbes, Leibniz 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 understand points of view and to think through the consequences of novel ideas. 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 discursive, writing and research 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 very wide range of options, including many 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, which may

be 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	

COURSES
• **Computer Science:**
  ○ Functional programming
  ○ Design and analysis of algorithms
  ○ Ethics and responsible innovation
  ○ Imperative programming
  ○ Discrete mathematics
  ○ Probability
• **Philosophy:**
  ○ General philosophy
  ○ Elements of deductive logic
  ○ Turing on computability and intelligence
	ASSESSMENT
	Three Computer Science examinations
	
	Two Philosophy examinations

YEAR 2	

COURSES
• **Computer Science core courses (25%):**
  ○ Models of computation
  ○ Algorithms
  ○ Group design practical
• **Computer Science options (25%):**
Current options include:
  ○ Compilers
  ○ Databases
  ○ Artificial intelligence
	ASSESSMENT
	Four Computer Science examinations

YEAR 2	
• **Philosophy (50%):** Current options include: ○ Knowledge and reality ○ Early modern philosophy ○ Philosophy of science ○ Philosophy of mind ○ Ethics	

YEAR 3	
COURSES • **Computer Science (25–75%):** Current options include: ○ Computational complexity ○ Machine learning ○ Computer-aided formal verification ○ Computers in society ○ Knowledge representation and reasoning • **Philosophy (25–75%):** Current options include: ○ Philosophical logic ○ Philosophy of cognitive science ○ Philosophy of mathematics ○ Philosophy of logic and language	**ASSESSMENT** Between seven and nine examinations, including at least two in Computer Science and at least three in Philosophy

YEAR 4	
COURSES • **Computer Science:** Current advanced options include: ○ Advanced security ○ Automata, logic and games	**ASSESSMENT** Computer Science: one examination (or take-

YEAR 4	
○ Computational game theory ○ Computational learning theory ○ Concurrent algorithms and data structures ○ Quantum computer science ○ Optional Computer Science project • **Philosophy:** ○ Advanced options in philosophy ○ Optional Philosophy thesis *The courses listed above are illustrative and may change. A full list of current options is available on the Computer Science website.*	home exercise) per course Philosophy: for each course a three-hour written examination and 5,000-word essay

The University will seek to deliver this course in accordance with the description 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. These may include significant changes made necessary by a pandemic (including Covid-19), epidemic or local health emergency. For further information, please see the University's Terms and Conditions. For the latest information on the University's Covid-19 response and how it affects students please go to the Oxford University Covid-19 Response site.

Fees

These annual fees are for full-time students who begin this undergraduate course here in 2022.

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

Please note that while the University sets out its annual fees as a single figure, this is a combined figure for both your University and college fees. More information is provided in your Terms and Conditions.

Fee status	Annual Course fees
Home (UK, Republic of Ireland, Channel Islands & Isle of Man)	£9,250
Overseas (including most EU students– see Note below)	£39,010

Note: Following the UK's departure from the EU, most EU students starting a course in 2022/23 will pay fees at the 'Overseas' rate. Irish nationals living in the UK or Ireland, EU, other EEA, and Swiss

nationals who have been granted settled or pre-settled status in the UK under the EU settlement scheme will be eligible for 'Home fee' status and student loan support, subject to meeting residency requirements. We will contact you directly if we need further information from you to determine your fee status.

Please refer to the Undergraduate fee status and the Oxford and the EU pages for more information.

Living costs

Living costs for the academic year starting in 2022 are estimated to be between £1,215 and £1,755 for each month you are in Oxford. Our academic year is made up of three eight-week terms, so you would not usually need to be in Oxford for much more than six months of the year but 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	£290	£410	£2,610	£3,690
Accommodation (including utilities)	£680	£810	£6,120	£7,290
Personal items	£135	£260	£1,215	£2,340
Social activities	£45	£120	£405	£1,080
Study costs	£45	£100	£405	£900
Other	£20	£55	£180	£495
Total	**£1,215**	**£1,755**	**£10,935**	**£15,795**

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. In addition to reviewing the information above, you should fully consider and research your personal likely living costs.

When planning your finances for future years of study at Oxford beyond 2022-23, you should allow for an estimated increase in living expenses of 3% each year.

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.