# I'm Considering Computer Science & Philosophy: What Should I Read?

## Resources and Advice Online

The Oxford Computer Science website offers many useful resources to help you prepare for application – see https://www.cs.ox.ac.uk/admissions/undergraduate/why_oxford/reading.html for a page on "Background reading & activities". For more on links between the disciplines, see www.philocomp.net.

## Getting Into Oxford

With regard to admission, it's first important to note that (a) you will not be judged at all on what you know about Philosophy (so you're not expected to have read any "classic" works, for example); and (b) the most important factor for winning a place in CS&P is your ability in mathematical, computational, and logical problem-solving. So from the point of view of preparing for application, most of your effort should go into practising mathematics for the Test of Mathematics for University Admission (TMUA). Useful resources are available at https://www.maths.ox.ac.uk/study-here/undergraduate-study/tmua, James Munro's https://www.maths.ox.ac.uk/study-here/undergraduate-study/tmua/mat-livestream gives livestreams weekly, and other resources are listed on the "Background reading" page mentioned above. For example, you might want to try out the STEP support programme offered by Cambridge University, while NRich Maths offers problem-solving resources, and Project Euler gets you started on mathematical programming.

## Philosophy Choices at Oxford

Computer Science & Philosophy (CS&P) is an extremely flexible degree programme, offering a very wide choice of Philosophy courses, none of which is compulsory beyond the first year. So if you wish, you can focus on courses that are relatively technical (e.g. Philosophical Logic, Philosophy of Mathematics or Physics), or connected more with AI (e.g. Philosophy of Language, Mind, or Cognitive Science, or Ethics of AI and Digital Technology), or science more generally (e.g. Knowledge and Reality, Philosophy of Science and/or Social Science), or in "practical" Philosophy (e.g. Ethics, Practical Ethics, Theory of Politics), or more historical (e.g. Early Modern Philosophy, Plato, Aristotle, Kant, Post-Kantian Philosophy, Wittgenstein). Other possibilities include Aesthetics, Philosophy of Religion, Feminist Theory, or a Thesis in an area of your choice.

## Sampling First Year Philosophy

In the first year, the Philosophy side of CS&P involves three components, of which the largest is "Philosophical Topics in Logic and Probability" (which is taken also by students Mathematics & Philosophy, and Physics & Philosophy). One of the other components, "Alan Turing on Computability and Intelligence", is taken only in CS&P, introducing foundational theory of computation as well as issues in the philosophy of mind. The upshot is that first years in CS&P study more logic, probability, and theory of computation – all of which are central to Computer Science – than single honours CS students! The only component that would be out of place in a pure CS degree is "General Philosophy", which introduces a range of central topics about knowledge and our place in the world, starting from the writings of some classic thinkers (Descartes, Locke, and Hume). To sample this, go to http://podcasts.ox.ac.uk/series/general-philosophy-2018, where you can find recordings of Peter Millican's 2018 *General Philosophy* lectures (and accompanying handouts).

## Will I Enjoy Philosophy?

Perhaps the best way to work out whether you will enjoy studying Philosophy is to spend time thinking for yourself about philosophical problems in the company of books like those below. Law's book is particularly good as an introduction, offering short (but substantial) chapters on 25 varied topics. Reading and thinking through one of these each day would be a great way of discovering whether you will enjoy Philosophy:

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| Stephen Law | *The Philosophy Gym* (Headline, 2004) |
| Simon Blackburn | *Think* (Oxford, 2001) |
| Nigel Warburton | *Philosophy: The Basics* (Routledge, 1992) |
| Thomas Nagel | *What Does It All Mean?* (Oxford, 1987) |
| Edward Craig | *Philosophy: A Very Short Introduction* (Oxford, 2002) |

Baggini and Dennett offer a wide range of short philosophical puzzles and thought-experiments:

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| Julian Baggini | *The Pig That Wants to be Eaten* (Granta, 2005) |
| Daniel Dennett | *Intuition Pumps and Other Tools for Thinking* (Penguin, 2014) |

But if, on the other hand, you want to go more deeply into some problems of metaphysics:

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| Earl Conee & Theodore Sider | *Riddles of Existence* (Oxford, 2005) |

The recent exciting developments in AI have thrown up all sorts of new questions on the boundary between Philosophy and Computing. Amongst many stimulating books on the theoretical side, you might try:

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| Christopher Summerfield | *These Strange New Minds* (Penguin, 2025) |
| David Chalmers | *Reality+*: *Virtual Worlds and Problems of Philosophy* (Penguin, 2022) |
| Melanie Mitchell | *Artificial Intelligence: A Guide for Thinking Humans* (Pelican, 2020) |

Finally Ethics is a major part of Philosophy, and increasingly seen as crucially important in the area of Artificial Intelligence and its applications (as discussed in the first book here, and the *Futuremakers* podcast below):

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| David Edmonds (editor) | *AI Morality* (Oxford, 2024) |
| Simon Blackburn | *Ethics: A Very Short Introduction* (Oxford, 2nd edition, 2021) |
| David Edmonds | *Would You Kill the Fat Man?* (Princeton, 2015) |
| Peter Singer | *Ethics* (Oxford Readers, 1994) |

The Edmonds collection has 20 chapters, all on different topics in AI Ethics, and mostly by Oxford academics. Blackburn gives an excellent overview of Ethics, Edmonds introduces the subject through discussion of the notorious "Trolley Problem", while Singer provides a wide range of readings from Plato to the modern world.

## Reading on Alan Turing and AI

Alan Turing's fascinating work – which invented the subject of Computer Science and raised key questions about AI – features prominently in the first year of the CS&P course (you can find related videos and lectures at https://www.philocomp.net/videos/turing.htm). If you're keen to read up on this, try:

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| Andrew Hodges | *Turing: A Natural Philosopher* (Phoenix, 1997) |
| Alan Turing and Charles Petzold | *The Annotated Turing* (John Wiley, 2008) |
| Jack Copeland | *Artificial Intelligence: A Philosophical Introduction* (Blackwell, 1993) |
| Michael Wooldridge | *The Road to Conscious Machines* (Penguin, 2020) |

Hodges' book is short but informative. Petzold's book is very difficult in places, but it's worth trying the early chapters – we use this book in the first year course. Copeland and Wooldridge (a well-known Oxford Professor) give accessible and well-balanced introductions to the Philosophy and the History of AI.

## Philosophical Podcasts

There are quite a number of excellent podcasts on Philosophy, several coming from authors listed earlier:

*Philosophy Bites*: from Nigel Warburton & David Edmonds, features an extensive series of discussions with leading philosophers, covering a huge range of topics

*Google DeepMind: The Podcast*: Hannah Fry interviews a wide range of experts on AI

*Sean Carroll's Mindscape Podcast*: "conversations with the world's most interesting thinkers"

*In Our Time*: Melvyn Bragg's classic BBC Radio 4 series, has many episodes on philosophical themes

*Philosophy 24/7*: David Edmonds interviews leading philosophers about highly relevant moral issues

*The Public Philosopher*: Michael Sandel (Princeton) discusses contemporary moral problems

*Philosophy: The Classics*: Nigel Warburton reads from his book which introduces 27 key historical texts

*Philosophy and Science of Human Nature*: Tamar Gendler (Yale) relates classic philosophical writings to contemporary work in cognitive science

*Hi Phi Nation*: Barry Lam finds philosophical ideas, tensions and unquestioned assumptions in news stories

Finally, of particular interest to CS&P, is the first series of the *Futuremakers* podcast, devoted to issues in AI Ethics (see https://www.research.ox.ac.uk/Article/2018-10-22-the-futuremakers-podcast for details), and involving discussions between AI researchers, social scientists and philosophers from Oxford – people you might meet and learn from if you come to study Computer Science & Philosophy here!