



Studying Computer Science at St Anne's College

Computer Science at Oxford concentrates on bridging theory and practice, including a wide variety of hardware and software technologies and their applications. It is possible to take some of these courses as a Visiting Student. Visiting Students will need to attend the lectures and practical sessions for the courses in the CS Department, and these will be supplemented with tutorials (1-3 students), or sometimes larger classes (10-12 students).

Some courses will be accessible to students with little formal educational background in computer science, whereas others require prior formal educational experience. ***It should be noted that all CS courses at Oxford require a very high level of mathematical ability as a prerequisite.*** Some previous experience with programming is also helpful. It is possible to combine CS courses with those in other subjects available to Visiting Students, so long as appropriate ability in those other subject areas are demonstrated as part of the application.

Recommended courses

The following courses are recommended for Visiting Students wishing to study computer science. To take the best advantage of computer science teaching at Oxford it is recommended that you study for the full academic year, as there is greater course selection when including study during Michaelmas term. You are also welcome to study for Michaelmas term only or Hilary and Trinity term. However depending on your background in computer science you may need to combine your study with another subject, for example philosophy or maths, to ensure a full course load.

The following is a list of courses that should be **accessible to students with little formal educational background in CS**. It should be noted, however, that all courses require a strong mathematics background.

Michaelmas term:

[Functional Programming](#) 16 Lectures, Michaelmas Term

[Discrete Mathematics](#) 16 Lectures, Michaelmas Term

Hilary term and Trinity term:

[Design and Analysis of Algorithms](#) 16 Lectures, Hilary Term

[Digital Systems](#) 24 Lectures, Hilary Term (16 lectures) & Trinity Term (8 lectures)

[Imperative Programming I and II](#) 20 Lectures, Hilary Term

[Imperative Programming III](#) 12 Lectures, Trinity Term

[Introduction to Formal Proof](#) 10 Lectures, Trinity Term

The following courses are **more advanced and require some formal education in CS** as well as **very strong mathematical ability**:

Michaelmas term:

[Models of Computation](#) 16 Lectures, Michaelmas Term

Hilary term:

[Concurrent Programming](#) 16 Lectures, Hilary Term

[Logic and Proof](#) 16 Lectures, Hilary Term

The following courses are usually taught through classes in the CS Department and all rely on some other elements of the core course, so enrolment in these options would be dependent on **demonstrating the correct level of previous experience in supporting areas of Computer Science**.

Michaelmas term:

[Computer Security](#) 16 Lectures, Michaelmas Term

[Computer-Aided Formal Verification](#) 16 Lectures, Michaelmas Term

[Databases](#) 16 Lectures, Michaelmas Term

[Principles of Programming Languages](#) 16 Lectures, Michaelmas Term

Hilary and Trinity term:

[Computational Complexity](#) 16 Lectures, Hilary Term

[Intelligent Systems](#) 16 Lectures, Hilary Term

[Compilers](#) 16 Lectures, Hilary Term

[Geometric Modelling](#) 16 Lectures, Hilary Term

[Computational Learning Theory](#) 20 Lectures, Hilary Term

[Knowledge Representation & Reasoning](#) 16 Lectures, Hilary Term

[Lambda Calculus and Types](#) 16 Lectures, Hilary Term

[Concurrency](#) 16 Lectures, Trinity Term

[Computer Architecture](#) 16 Lectures, Trinity Term

[Computer Graphics](#) 16 Lectures, Trinity Term

[Computer Networks](#) 16 Lectures, Trinity Term

There is a full list of courses on the [Computer Science Department](#) website. If you see courses there that are of interest to you and not contained on this guidance sheet please email visiting.students@st-annes.ox.ac.uk to check if there is availability before you submit your application.