Reading

We strongly recommend making use of the wide range of easily available resources such as books and online material like MOOCs, to learn a bit about programming and other areas of Computer Science before you start at UCL. Ideally try some programming in a language like C, Java or Python, as well.

The following list gives some suggestions of what to look at, but look around for alternatives that you have easy access to and fit your budget:

- Digitized by Peter Bentley, OUP Oxford, 2012, ISBN-13**:** 978-0199693795
- Head First C, by David Griffiths, Dawn Griffiths, O'Reilly Media, 2012, ISBN-13: 978-1449399917
- The C Programming Language (2nd Edition) by Brian Kernighan and Dennis Ritchie, published by Prentice Hall, 1988, ISBN-13 978-0131103627
- Programming in C, Fourth Edition by Stephen Kochan, published by Addison-Wesley Professional, 2014, ISBN-13: 978-0-321-77641-9.
- Learn You Haskell for Great Good! by Miran Lipovaca, published by No Starch Press, 2011, ISBN-13 978-1593272838, also available online at http://learnyouahaskell.com
- Developing Java Software, 3rd Edition, by Russel Winder and Graham Roberts, published by John Wiley and Sons, 2006 ISBN: 0-470-09025-1-0
- Python Crash Course: A Hands-On, Project-Based Introduction to Programming, No Starch Press, 2015, ISBN-13: 978-1593276034
- Relevant introductory programming and software design courses from places like iTunesU and Coursera.
- Schaum's Outline of Discrete Mathematics, Revised Third Edition, McGraw-Hill Education, 2009, ISBN-13: 978-0071615860
- Schaum's Outline of Logic, Second Edition, McGraw-Hill Education, 2011, ISBN-13: 978-0071755467
- Logic: an introduction to elementary logic, W Hodges, Penguin, 2001, ISBN-13: 978-0141003146
- Also use online resources such as Wikipedia and similar sites.

After you start at UCL you will find that the UCL Science Library provides free access to many Computer Science textbooks via the e-book service. If you do need to buy your own textbooks, many are now available as e-books on platforms such as the Kindle at lower prices than paper books (and a lot less heavy!). Via UCL you will also get access to the extensive range of video training courses from Lynda.com.

Laptops

If you are thinking about buying a laptop computer, we would advise the following. The key requirements are a decent screen and keyboard, at least 8GB of memory and minimum of

256GB hard drive, preferably a SSD. Going for machine with 16Mbytes and a 512GB would be good but more expensive. Also you should carefully check the details of your warranty/guarantee and arrange proper insurance (full theft and accidental damage if possible).

The Apple Macbook Air or Macbook Pro are very good choices, and have the big advantage of there being two very large Apple Stores within walking distance of UCL.

Once enrolled at UCL you will have access to various higher education discounts offered by a range of manufacturers, including Apple. Hence, it can be worth waiting before making a final buying decision. You will be using your laptop a great deal during your time at UCL, so it is worth paying a bit extra for a good specification machine.

Having your own laptop is very strongly recommended but not an absolute requirement. If you don't have your own machine, the Computer Science department provides a number of computing labs within the department, and the UCL computing service (ISD) provides extensive facilities across UCL.

SmartPhones and Tablets

While not required, almost everyone has a smartphone that they are going to make a lot of use of. We would recommend a recent model iPhone or Android device. UCL apps, such as UCL GO!, are supported on Android and iOS devices, giving you quick access to maps, timetables and other useful information. As you learn to program you will also be developing apps for platforms such as Android or iOS as well.

Tablets like the iPad are also useful and widely used, but are again not required. A tablet won't be a suitable replacement for a laptop on Computer Science courses, so look at getting a laptop before spending money on a tablet.

Wireless Internet Access

When you enrol at UCL you will get free access to the Eduroam wireless network across the UCL Campus, and also at many higher education establishments throughout the UK and rest of the world. This will allow unrestricted internet access while on campus.

Linux/Unix

You will be making a lot of use of Unix, primarily via a version of Linux. If you don't know what Linux or Unix are, then find out know! There are a great many resources and tutorials available on line, as well as many free Linux distributions.

In addition, we would strongly recommend that you gain some familiarity with low-cost hardware devices like Arduino and Raspberry Pi. Obtaining a Raspberry Pi, learning how to set it up, install an operating system, and use Linux, would be a great preparation for your degree programme. It is also a very good platform to learn programming on.

A further advantage of an Apple laptop is that the operating system macOS is a version of Unix, and will provide very good support for programming and project work requiring Unix.