Department of Computer Science

About the department

Computer Science is a very exciting subject to study. The sheer variety of technologies that are available and that keep being invented, and the transformations that they are inducing in all sectors of activity and the well-being of societies, create huge opportunities for graduates. In the latest Research Assessment Exercise, we ranked 11th in the UK for the quality of our research output, with over a quarter of our publications recognised as world leading, and a further half internationally excellent.

You will be taught by world leaders in several areas of research such as Machine Learning (the science of systems that can learn from data), Algorithms, Bioinformatics, Software Language Engineering, Distributed Systems, and Information Security. This means that you will be exposed to the methods and techniques that cutting-edge companies are looking for, to become leaders in their sectors.

Entry requirements

The modules listed below are open to Study Abroad, International Exchange and European Exchange students who study here for a full year, or for Term 2&3 only. Unfortunately, Computer Science modules are not available to students who are here for the Autumn Term only as the exams will take place in Term 3 (summer term).

Students must have sufficient evidence of previous experience and knowledge as stated in the individual course pre-requisites. Please note that these courses may be adjusted slightly over the coming months which may involve some changes to the course content, learning objectives and summative assessment.

Each course is either 15 or 30 UK credits (7.5 or 15 ECTS) and starts in either the Autumn Term (September) or the Spring Term (January).

Important Note:

We cannot offer these modules to Term 1 students, due to all assessments taking place in the summer term.

The information contained in the module outlines on the following pages is correct at the time of publication but may be subject to change as part of our policy of continuous improvement and development.

royalholloway.ac.uk/Computer Science

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Module options for visiting students

Module number	Module title	Run time	UK Credits	Link to syllabus
CS2800	*Software Engineering*	Term 1 (Autumn)[1]	*15 UK credits*	[Syllabus Information](#)
CS2850	*Operating Systems*	Term 1 (Autumn)[1]	*15 UK credits*	[Syllabus Information](#)
CS2855	*Databases*	Term 1 (Autumn)[1]	*15 UK credits*	[Syllabus Information](#)
CS2860	*Algorithms and Complexity*	Term 2 (Spring)	*15 UK credits*	[Syllabus Information](#)
CS2900	*Multi-dimensional Data Processing*	Term 2 (Spring)	*15 UK credits*	[Syllabus Information](#)
CS2910	*Artificial Intelligence*	Term 2 (Spring)	*15 UK credits*	[Syllabus Information](#)
IY2760	*Introduction to Information Security*	Term 1 (Autumn)[1]	*15 UK credits*	[Syllabus Information](#)
IY2840	*Computer and Network Security*	Term 2 (Spring)	*15 UK credits*	[Syllabus Information](#)
CS3003	*IT Project Management*	Term 1 (Autumn)[1]	*15 UK credits*	[Syllabus Information](#)
CS3450	*Software Verification*	Term 2 (Spring)	*15 UK credits*	[Syllabus Information](#)
CS3470	*Compilers and Code Generation*	Term 1 (Autumn)[1]	*15 UK credits*	[Syllabus Information](#)

[1] Term 1 Computer Science modules are **not** available to Term 1 only students.

Module options for visiting students

CS3480	Software Language Engineering	Term 2 (Spring)	15 UK credits	Syllabus Information
CS3490	Computational Optimisation	Term 2 (Spring)	15 UK credits	Syllabus Information
CS3510	Functional Programming and Applications	Term 2 (Spring)	15 UK credits	Syllabus Information
CS3600	Quantum Computation	Term 1 (Autumn) [1]	15 UK credits	Syllabus Information
CS3870	Advanced Algorithms and Complexity	Term 2 (Spring)	15 UK credits	Syllabus Information
CS3920	Machine Learning	Term 1 (Autumn) [1]	15 UK credits	Syllabus Information
CS3930	Computational Finance	Term 2 (Spring)	15 UK credits	Syllabus Information
CS3950	Deep Learning	Term 2 (Spring)	15 UK credits	Syllabus Information