

Identification of external body responsible for teaching this paper.

## BA Computer Science

### Part: FPE (Year 1)

**Course structure:** 10 compulsory courses: 9 in Computer Science, 1 taught in conjunction with Mathematics (with lectures organised by the Mathematical Institute).

Paper	Term	Faculty		College		Comments
		Lectures	Classes	Tutorials	Classes	
Introduction to University-Level Mathematics	MT	8		2		Taught by the Maths Institute: wks 1 and 2 only
	HT					
	TT					
Discrete Mathematics (CS3)	MT	16		4		
	HT					
	TT					
Functional Programming (CS1)	MT	16		7		
	HT					
	TT					
Linear Algebra (CS4)	MT	24		4		
	HT					
	TT					
Continuous Mathematics (CS3)	MT					
	HT	16		4		
	TT					
Probability	MT	16		4		Taught by the Maths Institute.
	HT					
	TT					
Design & Analysis of Algorithms (CS1)	MT					
	HT	16		4		
	TT					
Digital Systems (CS4)	MT					
	HT	16		4		
	TT	8		2		
Imperative Programming I (CS2)	MT					
	HT	16		4		
	TT					
Imperative Programming II (CS2)	MT					
	HT					
	TT	16		4		
Introduction to Formal Proof (CS4)	MT					
	HT					
	TT	10		2		

**Notes:**

- All first year courses are accompanied by tutorials organised by colleges: the norm is 4 one-hour tutorials (with the exception of Functional Programming, which may have up to 7 tutorials).
- Practical sessions for courses organised by the Department of Computer Science usually start in Week 2 of the term and there are normally 4 two-hour sessions for each course during the term.
- There will usually be a number of exercises that you will need to complete for each course. For example, a course with two practical exercises might have a practical timetable as follows:
  - Weeks 2, 4 Classes for first practical exercise
  - Weeks 6, 8 Classes for second practical exercise

Details of practical sessions are most easily described in narrative format for this course.

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**BA Computer Science**  
**Part: FHS Part A (Year 2)**

Clear notation of the course structure.

**Course structure:** 4 core courses; 4 optional courses from Schedule A.

Paper	Term	Faculty		College		Comments
		Lectures	Classes	Tutorials	Classes	
<b>Core courses</b>						
1. Models of Computation	MT	16		4		
2. Object Oriented Programming	MT	16		4		
3. Concurrent Programming	HT	16		4		
4. Logic and Proof	HT	16		4		
5. Group Design Practical	HT/TT	7				6-7 one-hour seminars on software engineering/ testing/working in teams and version control
<b>AND four from the schedule A options below:</b>						
Databases	MT	16	4			
Intelligent Systems	MT	16	4			
Algorithms and Data Structures	HT	16	6			
Compilers	HT	16	4			
Concurrency	HT	16	4			
Computer Architecture	TT	16	4			
Computer Graphics	TT	16	4			
Computer Networks	TT	16	4			

Further detail given on the teaching content of this component of the course.

**Notes:**

- Second year core courses are accompanied by tutorials organised by colleges; the norm is 4 one-hour tutorials for course with practicals and 5 or 6 one-hour tutorials for courses without practicals.
- Problem classes will be organised centrally for the computer science optional courses, although colleges may also organise tutorials.
- The group design practical, which is part of the practical requirements for the year, is intended to take 20-30 hours, mainly during Hilary term (with some work in Trinity term).

*[Statement explaining college opt-out from departmental classes to be added here.]*

Signals further potential for variation in college teaching provision.

Wording indicates the possibility of variation in teaching between colleges.

**BA Computer Science**  
**Part: FHS Part B (Year 3)**

**Course structure:** 6 optional courses from schedules B1, B2 and B4 with the following conditions:

- no more than 2 subjects from Schedule B1, and no more than 2 subjects from Schedule B4;
- You cannot take a course you offered in your second year;
- You must also take a project, which is worth one third of the year.

Row added to enhance clarity regarding the course structure.

Paper	Term	Faculty		College		Comments
		Lectures	Classes	Tutorials	Classes	
<b>Schedule B1</b>						
Databases	MT	16	4			
Intelligent Systems	MT	16	4			
Algorithms and Data Structures	HT	16	6			
Compilers	HT	16	4			
Concurrency	HT	16	4			
Computer Architecture	TT	16	4			
Computer Graphics	TT	16	4			
Computer Networks	TT	16	4			
<b>Schedule B2</b>						
Computer Security	MT	16	4			
Computer-Aided Formal Verification	MT	16	6			
Machine Learning	MT	16	4			
Principles of Programming Languages	MT	16	6			
Computational Complexity	HT	16	6			
Geometric Modelling	HT	16	4			
Knowledge Representation & Reasoning	HT	16	5			
Lambda Calculus and Types	HT	16	7			
Integer Programming	MT	16				Run by the Maths Institute
<b>Schedule B4</b>						
Communication Theory (B8.4)	MT	16				Run by the Maths Institute
Set Theory (B1.2)	HT	16				Run by the Maths Institute
<b>Notes:</b>						
<ul style="list-style-type: none"> <li>• Third year students are supported by specialist inter-college classes which replace college tutorials.</li> </ul> <p><i>[Statement explaining college opt-out from departmental classes to be added here.]</i></p>						

Gives clear indication of which department is responsible for teaching.

Explains why nothing is listed in the college teaching columns.

**BA Computer Science**  
**Part: FHS Part C (Year 4)**

**Course structure:** 5 optional subjects from Schedule C1; plus a project worth 3/8 of the year's assessment.

Paper	Term	Faculty		College		Comments
		Lectures	Classes	Tutorials	Classes	
<b>Schedule C1</b>						
Automata, Logic and Games	MT	24	7			
Categories, Proofs and Processes	MT	20	7			
Computational Game Theory	MT	20	7			
Computer Animation	MT	20	4			
Concurrent Algorithms and Data Structures	MT	20	4			
Probabilistic Model Checking	MT	20	4			
Quantum Computer Science	MT	24	7			
Advanced Machine Learning	HT	20	6			
Advanced Security	HT	18	4			
Database Systems Implementation	HT	22	6			
Deep Learning for Natural Language Processing	HT		0			Advises students of exceptional teaching pattern for this component of the course.
Probability and Computing	HT	20	6			
Visual Analytics	HT	16	5			
Requirements	TT	16				A one-week course running Monday-Friday, 9.30 - 5.30 pm, inclusive of all classes and lectures.

**Notes:**

- Fourth year students are supported by specialist inter-college classes which replace college tutorials.

4th year projects run from the start of Michaelmas term, with a submission date of Monday, week 5, Trinity term. Students receive 6 x one-hour supervision tutorials per term.

Informs students of the level of teaching they should expect for this part of their course.