

School of Computer Science

Computer Science (CS) Modules

CS1002 Computer Science				
SCOTCAT Credits:	20	SCQF Level 7	Semester:	1
Planned timetable:	10.00 am			
This module provides an introduction to object-oriented modeling and programming, using UML and Java. No previous programming experience is assumed.				
Programme module type:	Compulsory for Computer Science B.Sc., Internet Computer Science B.Sc., Joint Computer Science degrees, Computer Science M.Sci.			
Pre-requisite(s):	Mathematics (Higher or A-Level at Grade B or better)	Anti-requisite(s):	CS2101	
Required for:	CS1004, CS1006, CS2001, CS2006			
Learning and teaching methods and delivery:	Weekly contact: 4 lectures, 1 tutorial and 1 x 3-hour practical class.			
	Scheduled learning: 88 hours		Guided independent study: 112 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	As used by St Andrews: Coursework = 40%, Written Examination = 60%			
Module Co-ordinator:	cs1000.coord@cs.st-andrews.ac.uk			

CS1004 Internet Programming				
SCOTCAT Credits:	20	SCQF Level 7	Semester:	2
Planned timetable:	10.00 am			
This module provides an introduction to concepts in networked computing: client-server architectures, addressing, protocols and networking technologies. It also develops the use of Java for programming networked and web applications.				
Programme module type:	Compulsory for Computer Science B.Sc., Internet Computer Science B.Sc., Joint Computer Science degrees, Computer Science M.Sci.			
Pre-requisite(s):	CS1002	Anti-requisite(s):	CS2101	
Required for:	CS2001			
Learning and teaching methods and delivery:	Weekly contact: 4 lectures, 1 tutorial and 1 x 3-hour practical class.			
	Scheduled learning: 88 hours		Guided independent study: 112 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	As used by St Andrews: Coursework = 40%, Written Examination = 60%			
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CS1005 Computer Science in Everyday Life				
SCOTCAT Credits:	20	SCQF Level 7	Semester:	1
Planned timetable:	12.00 noon			
This module introduces key ideas of Computer Science through examination of the working of devices and services which are part of modern everyday life, such as search engines, personal music players, mobile telephones and social networking sites. Students are led to develop an understanding of some fundamentals of Computer Science, as well as gaining transferable skills in critical reading, research in the technical literature and essay writing.				
Programme module type:	Optional for Computer Science B.Sc., Internet Computer Science B.Sc., Joint Computer Science degrees, Computer Science M.Sci.			
Learning and teaching methods and delivery:	Weekly contact: 3 lectures and 1 tutorial.			
	Scheduled learning: 44 hours		Guided independent study: 156 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	As used by St Andrews: Coursework = 40%, Written Examination = 60%			
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CS1006 Programming Projects				
SCOTCAT Credits:	20	SCQF Level 7	Semester:	2
Planned timetable:	11.00 am			
This module reinforces key Java programming skills gained in CS1002, by means of a series of coursework assignments posed as mini-projects. These are designed to offer increasing depth and scope for creativity as the module progresses.				
Programme module type:	Optional for Computer Science B.Sc., Internet Computer Science B.Sc., Joint Computer Science degrees, Computer Science M.Sci.			
Pre-requisite(s):	CS1002			
Learning and teaching methods and delivery:	Weekly contact: 1 lecture per fortnight, 1 tutorial and 2 x 3-hour practical class.			
	Scheduled learning: 83 hours		Guided independent study: 117 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	As used by St Andrews: Coursework = 100%			
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CS2001 Foundations of Computation				
SCOTCAT Credits:	30	SCQF Level 8	Semester:	1
Planned timetable:	9.00 am			
This module introduces the fundamental algorithms, data structures and ideas about formal languages lying at the heart of modern software, and develops skills in programming and analysis.				
Programme module type:	CS2101 or CS2001 is compulsory for Computer Science B.Sc., Internet Computer Science B.Sc., Joint Computer Science degrees, Computer Science M.Sci.			
Pre-requisite(s):	CS1002, CS1004	Anti-requisite(s):	CS2101	
Required for:	CS2002, CS2003, CS3051, CS3052, CS3053, CS3099, CS3101, CS3102, CS3104, CS3105, CS3106, CS3301, CS3302			
Learning and teaching methods and delivery:	Weekly contact: 4 lectures, 1 tutorial and 2 x 3-hour practical class.			
	Scheduled learning: 121 hours		Guided independent study: 179 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	As used by St Andrews: Coursework = 40%, Written Examination = 60%			
Module Co-ordinator:	cs2000.coord@cs.st-andrews.ac.uk			

CS2002 Advanced Computer Science				
SCOTCAT Credits:	30	SCQF Level 8	Semester:	2
Planned timetable:	9.00 am			
This module develops skills in programming in C, systems programming, digital logic and low-level computer organisation.				
Programme module type:	Compulsory for Computer Science B.Sc., Internet Computer Science B.Sc., Joint Computer Science degrees, Computer Science M.Sci.			
Pre-requisite(s):	CS2001 or CS2101			
Required for:	CS3051, CS3052, CS3053, CS3099, CS3101, CS3102, CS3104, CS3105, CS3106, CS4201, CS4202, CS4203			
Learning and teaching methods and delivery:	Weekly contact: 4 lectures, 1 tutorial and 2 x 3-hour practical class.			
	Scheduled learning: 121 hours		Guided independent study: 179 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	As used by St Andrews: Coursework = 40%, Written Examination = 60%			
Module Co-ordinator:	cs2000.coord@cs.st-andrews.ac.uk			

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CS2003 Advanced Internet Programming				
SCOTCAT Credits:	30	SCQF Level 8	Semester:	2
Planned timetable:	11.00 am			
This module explores further concepts and abstractions for Internet programming. Students are introduced to distributed computing models, server-side and client-side computing. Issues in building distributed Internet applications are practically illustrated through programming in Java and JavaScript.				
Programme module type:	Compulsory for Internet Computer Science B.Sc. Optional for Computer Science B.Sc., Joint Computer Science degrees, Computer Science M.Sci.			
Pre-requisite(s):	CS2001 or CS2101			
Required for:	CS3102, CS3301, CS3302			
Learning and teaching methods and delivery:	Weekly contact: 4 lectures, 1 tutorial and 2 x 3-hour practical class.			
	Scheduled learning: 121 hours		Guided independent study: 179 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	As used by St Andrews: Coursework = 40%, Written Examination = 60%			
Module Co-ordinator:	cs2000.coord@cs.st-andrews.ac.uk			

CS2006 Advanced Programming Projects				
SCOTCAT Credits:	30	SCQF Level 8	Semester:	1
Planned timetable:	11.00 am			
This module introduces the functional and dynamic programming paradigms, using languages such as Haskell and Python. Understanding is reinforced through extensive practical exercises.				
Programme module type:	Optional for Computer Science B.Sc., Internet Computer Science B.Sc., Joint Computer Science degrees, Computer Science M.Sci.			
Pre-requisite(s):	CS1002			
Learning and teaching methods and delivery:	Weekly contact: 4 lectures, 1 tutorial and 2 x 3-hour practical classes.			
	Scheduled learning: 121 hours		Guided independent study: 179 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	As used by St Andrews: Coursework = 100%			
Module Co-ordinator:	cs2000.coord@cs.st-andrews.ac.uk			

CS2101 Foundations of Computation (Accelerated)				
SCOTCAT Credits:	40	SCQF Level 8	Semester:	1
Availability restrictions:	Available only to direct second year entrants.			
Planned timetable:	To be arranged.			
This module is an accelerated version of CS2001. It includes necessary background material from CS1002 and CS1004, as well as the same content of CS2001.				
Programme module type:	CS2101 or CS2001 is compulsory for Computer Science B.Sc., Internet Computer Science B.Sc., Joint Computer Science degrees, Computer Science M.Sci.			
Anti-requisite(s):	CS1002, CS1004, CS2001			
Learning and teaching methods and delivery:	Weekly contact: 5 lectures, 2 tutorials and 3 x 3-hour practical classes.			
	Scheduled learning: 176 hours		Guided independent study: 224 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%			
	As used by St Andrews: Coursework = 40%, Written Examination = 60%			
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Information Technology (IS) Modules

IS1101 Information and Communication Technologies				
SCOTCAT Credits:	10	SCQF Level 7	Semester:	2
Planned timetable:	12.00 noon Mon and Tue.			
This module provides an intensive practically oriented introduction to Information and Communication Technologies, covering aspects from a range of topics including the internet, web basics, word processing, graphics and presentation software.				
Programme module type:	Optional for Computer Science B.Sc., Internet Computer Science B.Sc., Joint Computer Science degrees, Computer Science M.Sci.			
Learning and teaching methods and delivery:	Weekly contact: 2 lectures and 1 x 3-hour practical class.			
	Scheduled learning: 55 hours		Guided independent study: 45 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%			
	As used by St Andrews: Coursework = 100%			
Module Co-ordinator:	is1000.coord@cs.st-andrews.ac.uk			

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IS1102 Computers and Society			
SCOTCAT Credits:	10	SCQF Level 7	Semester: 2
Planned timetable:	12.00 noon Wed and Fri.		
This module considers the use of computer systems from a technical, legal and ethical perspective, providing a grounding in the professional and social aspects of using computers and ICT.			
Programme module type:	Optional module for Computer Science B.Sc., Internet Computer Science B.Sc., Joint Computer Science degrees, Computer Science M.Sci.		
Learning and teaching methods and delivery:	Weekly contact: 2 lectures and 1 tutorial.		
	Scheduled learning: 33 hours	Guided independent study: 67 hours	
Assessment pattern:	As defined by QAA: Written Examinations = 60%, Practical Examinations = 0%, Coursework = 40%		
	As used by St Andrews: Coursework = 40%, Written Examination = 60%		
Module Co-ordinator:	is1000.coord@cs.st-andrews.ac.uk		

