2 Object-Oriented Programming					
SCOTCAT Credits:	20	SCQF level 7	Semester	1	
Academic year:	2020-2021				
Planned timetable:	anned timetable: Lectures: 3.00 pm Mon and Tue, exercise classes: either 9.00 am or 10.00 am Thu				
This module covers prol	olem-solving skills, p	rogramming basics a	nd object-oriented conce	epts, modelling and	
programming. Practical sk	tills are reinforced thro	ough a range of exercis	es and assignments cover	ring these topics.	
Pre-requisite(s):	Before taking this module you must have Mathematics (either Higher or A-Level at Grade A or better) You cannot take this module if you take CS2101				
Anti-requisite(s)					
Learning and teaching	Weekly contact: 4 le	ectures, 1 tutorial and 1	L x 3-hour practical class.		
methods of delivery:	Scheduled learning:	80 hours	Guided independent study: 120 hours		
Accordment nattorn	As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%				
Assessment pattern:	As used by St Andrew	ws:			
	Coursework = 100%				
Re-assessment pattern:	Programming assign	ment = 100%			

CS100

Programming with Data					
SCOTCAT Credits:	20	SCQF level 7	Semester	2	
Academic year:	2020-2021		·		
Planned timetable:	Lectures: 3.00 pm Mon and Tue, Exercise classes: either 9.00 am or 10.00 am Wed and Thu				
through a range of exerci data formats; files and da libraries; database design	nodule explores various aspects of data storage, processing and analysis. Programming skills are reinforced h a range of exercises and practicals covering various aspects of data handling. Topics include: persistent prmats; files and databases; file manipulation; binary and textual data; data processing using open source es; database design and use; object-relational mapping frameworks; processing and analysing data; issues of Themes related to current research in the area of data science and big data are emphasised.				
Pre-requisite(s):	Before taking this m	nodule you must pass (CS1002		
Anti-requisite(s)	You cannot take this	s module if you take CS	52101		
Learning and teaching	Weekly contact: 4	lectures, 1 tutorial and	1 x 3-hour practical class.		
methods of delivery:	Scheduled learning	: 88 hours	Guided independent stu	dy: 112 hours	
As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%				rk = 100%	
	As used by St Andrews: Coursework = 100%				
Re-assessment pattern:	Programming assign	Programming assignment = 100%			

005 Co	05 Computer Science in Everyday Life					
sc	COTCAT Credits:	20	SCQF level 7	Semester	1	
Ac	cademic year:	2020-2021				
Pla	anned timetable:	12.00 noon	.00 noon			
wł ne we	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, health informatics, mobile computing and socia networking sites. Students are led to develop an understanding of some fundamentals of Computer Science, as well as gaining transferable skills such as critical reading, research in the technical literature, data analysis and essay writing.				mputing and social nputer Science, as	
	Learning and teaching methods of delivery:					
	ethous of derivery.	Scheduled learning: 40 hours Guided independent study: 160 hours			dy: 160 hours	
As	ssessment pattern:	As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100% As used by St Andrews: Coursework = 100%				
Re	e-assessment pattern:	Coursework assignm	Coursework assignment = 100%			
м	odule teaching staff:	TBC Module coordin cs@st-andrews.ac.u	.,	rdinator - Computer Scien	ce (first-coord-	

CS100

CS1006 Programming Projects

Programming Projects					
20	SCQF level 7	Semester	2		
2020-2021	2020-2021				
11.00 am	L.00 am				
ey Java programmi	ng skills gained in CS	1002, by means of a se	ries of coursework		
ni-projects. These ar	e designed to offer ind	creasing depth and scope	for creativity as the		
Before taking this m	odule you must pass CS	51002			
Weekly contact: 1h x 5 weeks lectures, 1hr x 6 weeks tutorials, 2.5hr x 11 weeks					
demonstration sessions					
Scheduled learning: 83 hours Guided independent study: 117 hou		idy: 117 hours			
As defined by QAA:					
Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%					
As used by St Andrews:					
Coursework = 100%					
No Re-assessment a	No Re-assessment available				
TBC Module coordinator(s): First Level Coordinator - Computer Science (first-coord-					
cs@st-andrews.ac.uk)					
	2020-2021 11.00 am key Java programmin ni-projects. These ar Before taking this m Weekly contact: 1h demonstration sessi Scheduled learning: As defined by QAA: Written Examinatio As used by St Andree Coursework = 100% No Re-assessment a TBC Module coordin	2020-2021 11.00 am key Java programming skills gained in CS ni-projects. These are designed to offer inc Before taking this module you must pass CS Weekly contact: 1h x 5 weeks lectures, 1hr demonstration sessions Scheduled learning: 83 hours As defined by QAA: Written Examinations = 0%, Practical Exam As used by St Andrews: Coursework = 100% No Re-assessment available TBC Module coordinator(s): First Level Coor	2020-2021 11.00 am key Java programming skills gained in CS1002, by means of a set ni-projects. These are designed to offer increasing depth and scope Before taking this module you must pass CS1002 Weekly contact: 1h x 5 weeks lectures, 1hr x 6 weeks tutorials, 2.5hr demonstration sessions Scheduled learning: 83 hours Guided independent stu As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursewor As used by St Andrews: Coursework = 100% No Re-assessment available TBC Module coordinator(s): First Level Coordinator - Computer Scien		

Foundations of Computation					
SCOTCAT Credits:	30	SCQF level 8	Semester	1	
Academic year:	2020-2021				
Planned timetable:	9.00 am				
This module introduces	fundamental algorith	ims, data structures ai	nd formal language conc	epts at the heart of	
modern software, and de	evelops skills in progra	mming and analysis.			
Pre-requisite(s):	Before taking this mo	odule you must pass CS	1002 and pass CS1003		
Anti-requisite(s)	You cannot take this	module if you take CS2	101		
Learning and teaching	Weekly contact: 2hr x 10 weeks lectures, 2hr x 10 weeks discussion, 1hr x 9 weeks				
methods of delivery:	tutorial				
methous of derivery.	Scheduled learning:	eduled learning: 110 hours Guided independent study: 190 h		udy: 190 hours	
	As defined by QAA:				
Assessment pattern:	Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%				
Assessment pattern.	As used by St Andrews:				
	Continual Assessment = 60%, 48-hour Assessment = 40%				
Re-assessment pattern:	Existing Continual As	Existing Continual Assessment = 60%, 48-hour Assessment = 40%			
Module teaching staff:	TBC Module coordinator(s): Second Level Coordinator - Computer Science (second-coord-				
would teaching start.	cs@st-andrews.ac.uk)				

CS2002 Computer Systems

z Computer Systems						
SCOTCAT Credits:	30	SCQF level 8	Semester	2		
Academic year:	2020-2021					
Planned timetable:	9.00 am	9.00 am				
This module develops s organisation.	kills in programming in C, systems programming, digital logic and low-level compute					
Pre-requisite(s):	Before taking this mo	odule you must pass CS2	2001 or pass CS2101			
Learning and teaching methods of delivery:	Weekly contact: 2hr x 11 weeks lectures, 2hr x 11 weeks discussion, 1hr x 10 weeks tutorial					
methous of derivery.	Scheduled learning: 121 hours		Guided independent study: 179 hours			
Accordment nottorn	As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%					
Assessment pattern:	As used by St Andrew Continual Assessmen		50%, 48-hour Assessment = 40%			
Re-assessment pattern:	Existing Continual As	Existing Continual Assessment = 60%, 48-hour Assessment = 40%				
Module teaching staff:	TBC Module coordina cs@st-andrews.ac.uk	.,	ordinator - Computer Sc	ience (second-coord-		

CS20

CS2003 The Internet and the Web: Concepts and Programming

The internet and the web: Concepts and Programming					
SCOTCAT Credits:	30	SCQF level 8	Semester	1	
Academic year:	2020-2021				
Planned timetable:	11.00 am	1.00 am			
This module introduces the student to the Internet and the World Wide Web from a Computer Science perspective. It consists of two complementary streams: computer networks and web-based computing. Both streams introduce key concepts, current technologies, programming abstractions and the practical aspects of developing web-based and network applications.					
Co-requisite(s):	You must also take	You must also take CS2001 or take CS2101			
Learning and teaching	Weekly contact : 2hr x 10 weeks lectures, 1hr x 10 weeks discussion, 1hr x 9 weeks tutorial, 1hr x 10 weeks exercise class				
methods of delivery:	: Scheduled learning: 110 hours Guided independent study: 190 hours				
As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100					
Assessment pattern:	As used by St Andrews: Continual Assessment = 60%, 48-hour Assessment = 40%				
Re-assessment pattern:	Existing Continual A	Existing Continual Assessment = 60%, 48-hour Assessment = 40%			

CS2006 Advanced Programming Projects

Advanced Programming Projects						
SCOTCAT Credits:	30	SCQF level 8	Semester	2		
Academic year:	2020-2021					
Availability restrictions:	Only available to 2nd	Only available to 2nd Year students.				
Planned timetable:	11.00 am					
This module introduces t	he functional and dyn	amic programming pa	radigms, using languages	such as Haskell and		
Python. Understanding is	reinforced through e	xtensive practical exerc	cises.			
Pre-requisite(s):	Before taking this me	Before taking this module you must pass CS2001 or pass CS2101				
Learning and teaching	Weekly contact: 4 lectures, 1 tutorial and 2 x 3-hour practical classes.					
methods of delivery:	Scheduled learning: 121 hours		Guided independent st	Guided independent study: 179 hours		
Assessment pattern:	As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%					
Assessment pattern.	As used by St Andrews:					
	Coursework = 100%					
Re-assessment pattern:	No Re-assessment a	vailable				
Module teaching staff:	TBC Module coordinator(s): Second Level Coordinator - Computer Science (second-					
would teaching start.	coord-cs@st-andrews.ac.uk)					

101	1 Foundations of Computation (Accelerated)					
	SCOTCAT Credits:	40	SCQF level 8	Semester	1	
	Academic year:	2020-2021				
	Availability restrictions:	Available only to direct second year entrants.				
	Planned timetable:	To be arranged.				
		lerated version of CS2001. It includes necessary background material from core first-y same content as CS2001. You cannot take this module if you take CS1002 or take CS1003 or take CS2001				
	Anti-requisite(s)					
	Learning and teaching	Weekly contact: 2hr x 10 weeks lectures, 2hr x 10 weeks discussion, 3 x 1hr x 9 we tutorials				
	methods of delivery:	Scheduled learning: 160 hours Guided independent study:		udy: 240 hours		
	Assessment pattern:	As defined by QAA: Written Examinations = 0%, Practical Examinations = 0%, Coursework = 100%				
	Assessment pattern.	As used by St Andrews: Continual Assessment = 60%, 48-hour Assessment = 40%				
	Re-assessment pattern:	Existing Continual As	sessment = 60%, 48-ho	ur Assessment = 40%		
	Module teaching staff:	TBC Module coordinator(s): Second Level Coordinator - Computer Science (second-coord cs@st-andrews.ac.uk)			ience (second-coord-	

CS21