Master of Science Human Computer Interaction

Programme Requirements

Human Computer Interaction - MSc
IS5101 (15 credits) **and** (CS5001 (15 credits) **or** CS5002 (15 credits)) **and** CS5040 (15 credits) **and** CS5042 (15 credits) **and** (CS5041 (15 credits) **or** CS5044 (15 credits)) **and** Between 0 and 30 credits from Module List: CS4100 - CS4450 **and** Between 15 and 45 credits from Module List: IS5102 - IS5150, CS5003 - CS5089, ID5059 **and** (CS5098 (60 credits) **or** CS5099 (60 credits)) **Further requirements** Students must select 180 credits. **MPhil:** 120 credits from taught element of programme requirements (not including project/dissertation) plus a thesis of up to 40,000 words

For all Masters degrees there are exit awards available that allow suitably-qualified candidates to receive a Postgraduate Certificate or Postgraduate Diploma.

Compulsory modules:

IS5101 Masters Core Skills				
SCOTCAT Credits:	15	SCQF Level 11	**Semester:**	Whole Year
Planned timetable:	To be arranged.			
This module equips students with essential skills for completing an MSc in the School of Computer Science. Topics include: technical writing for Computer Science and Information Technology; use of bibliographic and referencing software; presentation skills; critical analysis of written work; generic research skills including framing research hypotheses, designing and conducting experiments, use of survey tools and gathering, analysing and presenting data; understanding basic statistics; use of project planning techniques; awareness of professional and ethical issues in research activities; carrying out a literature review; and awareness of what constitutes academic misconduct. Skills in these areas are reinforced through practical assignments.				
Programme module type:	Compulsory for all Postgraduate Programmes except European Masters in Dependable Software Systems.			
Learning and teaching methods and delivery:	**Weekly contact**: Lectures, seminars, tutorials and practical classes.			
Assessment pattern:	Coursework = 100%			
Module coordinator:	dopgt-cs@st-andrews.ac.uk			

EITHER

CS5001 Object-Oriented Modelling, Design and Programming				
SCOTCAT Credits:	15	SCQF Level 11	**Semester:**	1
Planned timetable:	Variable			
This module introduces and revises object-oriented modelling, design and implementation up to the level required to complete programming assignments within other MSc modules. Students complete a number of practical exercises in laboratory sessions.				
Programme module type:	Compulsory for Advanced Computer Science, Artificial Intelligence, Computer Communication Systems and Software Engineering Postgraduate Programmes, except when exempted following satisfactory performance in an assessment conducted by the school. Compulsory for European Masters in Dependable Software Systems Postgraduate Programme Either CS5001 or CS5002 is compulsory for Human Computer Interaction and Computing and Information Technology Postgraduate Programmes. Optional for Data-Intensive Analysis, Information Technology and Management and Information Technology Postgraduate Programmes.			
Anti-requisite(s):	CS5002			
Required for:	CS5011, CS5022, CS5031, CS5052			
Learning and teaching methods and delivery:	**Weekly contact**: Lectures, tutorials and practical classes.			
Assessment pattern:	Coursework = 100%			
Module coordinator:	dopgt-cs@st-andrews.ac.uk			

OR

CS5002 Programming Principles and Practice				
SCOTCAT Credits:	15	SCQF Level 11	**Semester:**	1
Planned timetable:	Variable			
This module introduces computational thinking and problem solving skills to students who have no or little previous programming experience. It covers general programming concepts used in the development of software applications, such as data structures, functions, choice, iteration, recursion and input/output. An easy-to-learn programming language is used to illustrate these concepts, and programming skills are reinforced through practical assignments.				
Programme module type:	Either CS5001 or CS5002 is compulsory for Computing and Information Technology and Human Computer Interaction Postgraduate Programmes. Optional for Data-Intensive Analysis, Information Technology and Management and Information Technology Postgraduate Programmes.			
Anti-requisite(s):	CS5001		**Required for:**	CS5003
Learning and teaching methods and delivery:	**Weekly contact**: Lectures, tutorials and practical classes.			
Assessment pattern:	Coursework = 100%			
Module coordinator:	dopgt-cs@st-andrews.ac.uk			

CS5040 Human Computer Interaction Principles and Methods

SCOTCAT Credits:	15	SCQF Level 11	**Semester:**	1
Planned timetable:	To be arranged.			
This module provides a grounded introduction to the principles of human computer interaction in the context of evaluation paradigms. Material includes: history of interfaces and interaction; the human (vision, perception, memory, hearing); the computer (from existing to next generation ubiquitous computing systems); paradigms of interaction; evaluation paradigms in HCI; guidelines and heuristics; experimental design and hypothesis testing in HCI; quantitative evaluation methods in HCI; qualitative evaluation methods in HCI.				
Programme module type:	Compulsory for MSc Human Computer Interaction Postgraduate Programme. Optional for other Postgraduate Programmes			
Anti-requisite(s):	CS3106			
Learning and teaching methods and delivery:	**Weekly contact**: Lectures, practical classes and tutorials.			
Assessment pattern:	2-hour Written Examination = 60%, Coursework = 40%			
Module coordinator:	dopgt-cs@st-andrews.ac.uk			

CS5042 User-Centred Interaction Design

SCOTCAT Credits:	15	SCQF Level 11	**Semester:**	2
Availability restrictions:	The module is available to all students enrolled on the MSc Human Computer Interaction Programme. A quota for other students may be necessary due to lab equipment constraints, in which case preference will be given to other MSc students.			
Planned timetable:	To be arranged.			
This module studies methodologies in interaction design that are at the core of current practice for user interface engineering and application development. Students work towards creating designs of interactive systems that are based on human, group and organisation needs rather than on technical constraints. The module does not involve a great deal of programming.				
Programme module type:	Compulsory for MSc Human Computer Interaction Postgraduate Programme Optional for all Postgraduate Programmes			
Learning and teaching methods and delivery:	**Weekly contact**: 2 lectures, 3 practicals and 1 tutorial.			
Assessment pattern:	Coursework = 85%, Presentation = 15%			
Module coordinator:	dopgt-cs@st-andrews.ac.uk			

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CS5041 Interactive Software and Hardware				
SCOTCAT Credits:	15	SCQF Level 11	**Semester:**	1
Availability restrictions:	The module is available to all students enrolled on the MSc Human Computer Interaction Programme. A quota for other students may be necessary due to lab equipment constraints, in which case preference will be given to other MSc students.			
Planned timetable:	To be arranged.			
This module develops prototype-building skills for a wide range of interactive technologies. Students learn how to create interactive hardware and software using technologies such as tangible programming kits, mobile devices, microprocessor kits and depth cameras. There is a strong emphasis on practical assignments.				
Programme module type:	Either CS5041 or CS5044 is compulsory for Human Computer Interaction Postgraduate Programmes Optional for other Postgraduate Programmes			
Co-requisite(s):	CS5001			
Learning and teaching methods and delivery:	**Weekly contact**: Lectures, practical classes and tutorials.			
Assessment pattern:	Coursework = 100%			
Module coordinator:	dopgt-cs@st-andrews.ac.uk			

OR

CS5044 Information Visualisation and Visual Analytics				
SCOTCAT Credits:	15	SCQF Level 11	**Semester:**	2
Planned timetable:	To be arranged.			
This module provides an introduction to information visualisation and visual analytics. It focuses on the question of how to utilise visual representations to make information accessible for exploration and analysis. The module covers basic principles of visualisation design and interaction principles. It introduces a range of visualisation techniques and tools, and discusses how these can be effectively applied in various scenarios for communication, exploration and analysis, and how to evaluate information visualisations in different contexts. Skills in designing, developing, and evaluating information visualisations are reinforced through practical assignments. There are no pre-requisites for this module but students should have basic programming skills (e.g. in Java or JavaScript).				
Programme module type:	Either CS5041 or CS5044 is compulsory for Human Computer Interaction Postgraduate Programmes Optional for all Postgraduate Programmes			
Learning and teaching methods and delivery:	**Weekly contact**: 3-hour lecture (x 11 weeks), 1-hour seminar (x 8 weeks)			
Assessment pattern:	2-hour Written Examination = 40%, Coursework = 60%			
Module coordinator:	dopgt-cs@st-andrews.ac.uk			

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CS5098 Group Project and Dissertation in Computer Science				
SCOTCAT Credits:	60	SCQF Level 11	**Semester:**	Summer
Planned timetable:	To be arranged.			
This module is a group-based MSc project on a topic in Computer Science. It results in an individual dissertation of no more than 15,000 words submitted by each student. Typically the dissertation comprises a review of related work, the extension of old or development of new ideas, software implementation and testing, analyses and evaluation. The dissertation may also include an agreed collaboratively-written group report. Each student is individually assessed, taking into account both individual and group submissions. Students are required to give a presentation of their work.				
Programme module type:	Either CS5099 or CS5098 is compulsory for the Advanced Computer Science, Artificial Intelligence, Data-Intensive Analysis, Human Computer Interaction, Computer Communication Systems and Software Engineering MSc			
Pre-requisite(s):	Admission to dissertation phase of MSc and permission of the Head of School			
Anti-requisite(s):	CS5099			
Learning and teaching methods and delivery:	**Weekly contact**: Meetings with supervisor.			
Assessment pattern:	Coursework = 100%			
Module coordinator:	dopgt-cs@st-andrews.ac.uk			

OR

CS5099 Dissertation in Computer Science				
SCOTCAT Credits:	60	SCQF Level 11	**Semester:**	Summer
Planned timetable:	To be arranged.			
This module is an individually supervised MSc project on a topic in Computer Science. It results in a dissertation of no more than 15,000 words. Typically the dissertation comprises a review of related work, the extension of old or development of new ideas, software implementation and testing, analyses and evaluation. Students are required to give a presentation of their work.				
Programme module type:	Either CS5099 or CS5098 is compulsory for the Advanced Computer Science, Artificial Intelligence, Data-Intensive Analysis, Human Computer Interaction, Computer Communication Systems and Software Engineering MSc			
Pre-requisite(s):	Admission to dissertation phase of MSc and permission of the Head of School			
Anti-requisite(s):	CS5098			
Learning and teaching methods and delivery:	**Weekly contact**: Meeting with supervisor.			
Assessment pattern:	Coursework = 100%			
Module coordinator:	dopgt-cs@st-andrews.ac.uk			

For optional modules available - see the pdf online called Computer Science - optional modules 2017 - 2018.