

Masters in Computing and Information Technology

Programme Requirements

Taught Element, and PG Diploma in Computing and Information Technology:

120 credits:

- IS5101
- CS5001 or CS5002
- CS5003
- up to 30 credits from CS4100 - CS4450, subject to appropriate experience
- remaining credits from IS5102 - IS5150, CS5010 - CS5089, ID5059

MSc:

120 credits from Taught Element, plus IS5198 or IS5199 or CS5098 or CS5099

MPhil:

120 credits from Taught Element of Computing and Information Technology plus a 40,000-word thesis

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 Erasmus Mundus Dependable Software Systems.				
Learning and teaching methods and delivery:	Weekly contact: Lectures, seminars, tutorials and practical classes.				
Assessment pattern:	Coursework = 100%				
Module Co-ordinator:	masters-coord-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, Human Computer Interaction, Networks and Distributed Systems, Software Engineering and Erasmus Mundus Dependable Software Systems Postgraduate Programmes. Either CS5001 or CS5002 is compulsory for Computing and Information Technology Postgraduate Programme. Optional for Management and Information Technology Postgraduate Programme.			
Anti-requisite(s):	CS5002	Required for:	CS5011, CS5021, CS5031	
Learning and teaching methods and delivery:	Weekly contact: Lectures, tutorials and practical classes.			
Assessment pattern:	Coursework = 100%			
Module Co-ordinator:	masters-coord-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 CS5002 or CS5001 is compulsory for Computing and Information Technology Postgraduate Programme. Optional for Management and Information Technology Postgraduate Programme.			
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 Co-ordinator:	masters-coord-cs@st-andrews.ac.uk			

CS5003 Masters Programming Projects				
SCOTCAT Credits:	15	SCQF Level 11	Semester:	2
Planned timetable:	Variable			
This module reinforces key programming skills gained in CS5002, by means of a series of coursework assignments posed as small programming projects. These are designed to offer increasing depth and scope for creativity as the module progresses.				
Programme module type:	Compulsory for Computing and Information Technology Postgraduate Programme. Optional for Advanced Computer Science, Artificial Intelligence, Data-Intensive Analysis, Dependable Software Information Technology, Human Computer Interaction MSc Programmes			
Pre-requisite(s):	CS5002	Anti-requisite(s):	IS5108	
Learning and teaching methods and delivery:	Weekly contact: Lectures, tutorials and practical classes.			
Assessment pattern:	Coursework = 100%			
Module Co-ordinator:	masters-coord-cs@st-andrews.ac.uk			

Compulsory module for MSc - one of:

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:	Optional for MSc in Advanced Computer Science, in Artificial Intelligence, in Computing & IT, in Human Computer Interaction, in Networks and Distributed Systems, Software Engineering Postgraduate Programmes.			
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 Co-ordinator:	masters-coord-cs@st-andrews.ac.uk			

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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:	Optional for MSc in Advanced Computer Science, in Artificial Intelligence, in Human Computer Interaction, in Networks and Distributed Systems, and Software Engineering Postgraduate Programmes.			
Pre-requisite(s):	Admission to dissertation phase of MSc	Anti-requisite(s):	CS5098	
Learning and teaching methods and delivery:	Weekly contact: Meeting with supervisor.			
Assessment pattern:	Coursework = 100%			
Module Co-ordinator:	masters-coord-cs@st-andrews.ac.uk			

IS5198 Group Project and Dissertation in Information Technology				
SCOTCAT Credits:	60	SCQF Level 11	Semester:	Summer
Planned timetable:	To be arranged.			
This module is a group-based MSc project on an approved topic in Information Technology which shows appropriate competences in the field. 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, the development of a software system or skilled use of one or more applications, a critical analysis and evaluation of the project outputs. 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:	Optional for Information Technology, Computing and Information Technology MSc Postgraduate Programmes.			
Pre-requisite(s):	Admission to dissertation phase of MSc and the consent of the Head of School			
Anti-requisite(s):	IS5199			
Learning and teaching methods and delivery:	Weekly contact: Meeting with supervisor.			
Assessment pattern:	Coursework (Dissertation) = 100%			
Module Co-ordinator:	masters-is-coord-cs@st-andrews.ac.uk			

IS5199 Dissertation in Information Technology				
SCOTCAT Credits:	60	SCQF Level 11	Semester:	Summer
Planned timetable:	To be arranged.			
<p>This module is an individually supervised MSc project on an approved topic in Information Technology which shows appropriate competences in the field. The project 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, the development of a software system or skilled use of one or more applications, a critical analysis and evaluation of the project outputs. Students are required to give a presentation of their work.</p>				
Programme module type:	Optional for Information Technology, Computing and Information Technology MSc Postgraduate Programmes.			
Pre-requisite(s):	Admission to dissertation phase of the MSc			
Anti-requisite(s):	IS5198			
Learning and teaching methods and delivery:	Weekly contact: Meeting with supervisor			
Assessment pattern:	Coursework (Dissertation) = 100%			
Module Co-ordinator:	masters-is-coord-cs@st-andrews.ac.uk			

[Further optional modules are available - see the pdf online called 'PG Computer Science - optional modules 2016 - 2017.'](#)

