Dependable Software Systems

Programme Requirements:

European MSc Dependable Software Systems (collaborative) - European MSc

CS5001 (15 credits) **and** CS5899 (45 credits) **and**
 Between 15 and 30 credits from Module List: CS5010, CS5030 **and**
 Between 0 and 30 credits from Module List: CS4052, CS4402 **and**
 Between 0 and 45 credits from Module List: CS5010 - CS5014, CS5022, CS5030 - CS5033, CS5041, CS5052, CS5055, ID5059
 	
    CS5001 is compulsory unless an equivalent module has been taken at a partner institution as part of the DESEM programme.
    Between 30 and 45 credits must be taken from the Module Lists.
    Please balance your choices across the academic year.

Compulsory modules:

CS5001 Object-Oriented Modelling, Design and Programming

SCOTCAT Credits:	15	SCQF Level 11	**Semester**	Both
Academic year:	2018/9			
Availability restrictions:	This module is only available in Semester 2 to students enrolled on the 'with English Language' version of the programme. All other students must take the module in 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.				
Anti-requisite(s)	You cannot take this module if you take CS5002			
Learning and teaching methods of delivery:	**Weekly contact**: Lectures, tutorials and practical classes.			
Assessment pattern:	Coursework = 100%			
Module teaching staff:	TBC Module coordinator(s): Director of Postgraduate Teaching - Computer Science (dopgt-cs@st-andrews.ac.uk)			

CS5899 Dissertation in Dependable Software Systems

SCOTCAT Credits:	45	SCQF Level 11	**Semester**	Full Year
Academic year:	2018/9			
Availability restrictions:	Available only to students on European Masters in Dependable Software Systems and Erasmus Mundus MSc in Advanced Systems Dependability			
Planned timetable:	To be arranged.			
This module is an individually supervised dissertation, not exceeding 15,000 words, on a topic in computer science. Typically it comprises a literature review, extension of old or development of new ideas, their implementation and testing, summarised in a report, with the implementation based on sound theory and software engineering principles. Students will be required to give an assessed presentation of their work.				
Learning and teaching methods of delivery:	**Weekly contact**: Meeting with supervisor.			
	Scheduled learning: 0 hours		**Guided independent study:** 0 hours	
Assessment pattern:	**As used by St Andrews:** Coursework = 100%			
Module teaching staff:	TBC Module coordinator(s): DESEM Coordinator - Computer Science (desem-coord-cs@st-andrews.ac.uk)			

One or both of:

CS5010 Artificial Intelligence Principles

SCOTCAT Credits:	15	SCQF Level 11	**Semester**	1
Academic year:	2018/9			
Planned timetable:	To be arranged.			

This module covers foundational knowledge of Artificial Intelligence (AI). The module gives an overview of AI and its philosophy. It covers fundamental principles in AI: logical reasoning, reasoning in the presence of uncertainty, and machine learning. It shows how search is used to solve a variety of problems in AI. Notions such as agency and uncertainty in AI are covered. Finally, the philosophy of AI in practice and the philosophical problems in AI are shown.

Pre-requisite(s):	Before taking this module you must (pass CS2001 or pass CS2101) and pass CS2002 - relates to ug programmes only
Anti-requisite(s)	You cannot take this module if you take CS3105
Learning and teaching methods of delivery:	**Weekly contact**: Lectures, seminars, tutorials and practical classes.
	Scheduled learning: 25 hours / **Guided independent study:** 125 hours
Assessment pattern:	**As used by St Andrews:** 2-hour Written Examination = 60%, Coursework = 40%
Re-assessment pattern:	2-hour Written Examination = 60%, Existing Coursework = 40%
Module teaching staff:	TBC Module coordinator(s): Director of Postgraduate Teaching - Computer Science (dopgt-cs@st-andrews.ac.uk)

CS5030 Software Engineering Principles

SCOTCAT Credits:	15	SCQF Level 11	**Semester**	1
Academic year:	2018/9			
Planned timetable:	To be arranged.			

This module examines the key concepts in small and large-scale software development. Project management is explored, along with the processes involved in developing system requirements, functionality and high-level descriptions necessary to guide the development of, and assess, a working system.

Learning and teaching methods of delivery:	**Weekly contact**: Lectures, seminars, tutorials and practical classes.
	Scheduled learning: 25 hours / **Guided independent study:** 125 hours
Assessment pattern:	**As used by St Andrews:** 2-hour Written Examination = 60%, Coursework = 40%
Re-assessment pattern:	2-hour Written Examination = 60%, Existing Coursework = 40%
Module teaching staff:	TBC Module coordinator(s): Director of Postgraduate Teaching - Computer Science (dopgt-cs@st-andrews.ac.uk)

Optional modules are available - see the pdf online called Computer Science optional modules 2018-2019