Programme Requirements:

**Computing and Information Technology (with English Language) - MSc**

- 40 credits from Module List: ET5400 - ET5401 and
- 15 credits from Module List: CS5001 - CS5002

**And**

- 60 credits from Module List: IS5198 - IS5199, CS5098 - CS5099 and ET5402 (20 credits) and
- CS5001 (15 credits) and (CS5002 (15 credits) or CS5003 (15 credits)) and
- Between 0 and 30 credits from Module List: CS4052, CS4100 - CS4450 and
- Between 60 and 75 credits from Module List: IS5102 - IS5150, CS5010 - CS5089, ID5059

**Compulsory modules:**

**ET5400 English for Academic Purposes (Combined Masters)**

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<th>20</th>
<th>SCQF Level 11</th>
<th>Semester</th>
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**Academic year:** 2018/9

**Availability restrictions:** Available only to students on 'with English Language' MSc programmes in the School of Computer Science.

**Planned timetable:** To be arranged.

This module is designed to develop the academic literacy of students entering onto a taught masters programme at the University of St Andrews. Students develop the academic competence required for writing, delivering presentations, participating in seminars, researching for and evaluating source material, and developing criticality in respect of all aspects of their studies.

**Learning and teaching methods of delivery:**

- **Weekly contact:** 6 class tutorials (x 11 weeks), 0.5 individual supervision meeting (x 5 weeks)
- **Scheduled learning:** 69 hours
- **Guided independent study:** 132 hours

**Assessment pattern:**

- As used by St Andrews:
  - 2-hour Written Examination = 25%, Coursework = 75% Coursework contains 2 elements: an extended essay ((50% of grade) and a presentation (25% of grade).

**Re-assessment pattern:**

- 2-hour Written Examination = 50%, Coursework = 50%

**Module coordinator:** Mr J W Harvey

**Module teaching staff:** Mr J Harvey, Mrs K Tavakoli, Ms L Thirkell
### ET5401 English for Computer Science 1

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This module is designed to develop the academic literacy of students entering onto MSc programmes in the School of Computer Science, and this module runs in parallel with English for Academic Purposes (ET5400). Strategies learnt in ET5400 will be applied to specific Computer Science-based texts, and written and spoken tasks. Students will also participate in assessed group projects modelled on similar assessments in 5000-level Computer Science (CS) modules.

**Learning and teaching methods of delivery:**

- **Weekly contact:** 6 class tutorials (x 11 weeks), one individual supervision meeting (0.5 hours, x 5 weeks)
- **Scheduled learning:** 69 hours
- **Guided independent study:** 132 hours

**Assessment pattern:**

- As used by St Andrews:
  - Coursework = 100%

**Re-assessment pattern:**

- Coursework = 100%

**Module coordinator:**

- Ms A J Brooks

**Module teaching staff:**

- Ms J Brooks, Ms M Carr

### ET5402 English for Computer Science 2

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This module is designed to follow on from ET5401 and ET5400 to further enhance the academic literacy of students on MSc Programmes in the School of Computer Science. Strategies learnt on the two modules mentioned above will be applied to specific Computer Science-based texts, and written and spoken tasks. Students will also participate in assessed group projects modelled on similar assessments in 5000-level CS modules.

**Learning and teaching methods of delivery:**

- **Weekly contact:** 6 class tutorials (x 11 weeks), one individual supervision meeting (0.5 hours, x 5 weeks)
- **Scheduled learning:** 72 hours
- **Guided independent study:** 132 hours

**Assessment pattern:**

- As used by St Andrews:
  - Coursework = 100%

**Re-assessment pattern:**

- Coursework = 100%

**Module coordinator:**

- Ms A J Brooks

**Module teaching staff:**

- Ms J Brooks, Ms M Carr
### CS5001 Object-Oriented Modelling, Design Programming

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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.
- **Scheduled learning:** 77 hours
- **Guided independent study:** 73 hours

**Assessment pattern:**

- As used by St Andrews:
  - Coursework = 100%

**Module teaching staff:**

TBC Module coordinator(s): Director of Postgraduate Teaching - Computer Science (dopgt-cs@st-andrews.ac.uk)

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### CS5002 Programming Principles and Practice

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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.

**Anti-requisite(s):** You cannot take this module if you take CS5001

**Learning and teaching methods of delivery:**

- **Weekly contact:** Lectures, tutorials and practical classes.
- **Scheduled learning:** 35 hours
- **Guided independent study:** 115 hours

**Assessment pattern:**

- As used by St Andrews:
  - Coursework = 100%

**Module teaching staff:**

TBC Module coordinator(s): Director of Postgraduate Teaching - Computer Science (dopgt-cs@st-andrews.ac.uk)

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### CS5003 Masters Programming Projects

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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.

**Pre-requisite(s):** Before taking this module you must pass CS5002

**Anti-requisite(s):** You cannot take this module if you take IS5108

**Learning and teaching methods of delivery:**

- **Weekly contact:** Lectures, tutorials and practical classes.
- **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): Director of Postgraduate Teaching - Computer Science (dopgt-cs@st-andrews.ac.uk)
One of:

**CS5098 Group Project and Dissertation in Computer Science**

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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.

Pre-requisite(s): Requires admission to dissertation phase of msc and permission of the head of school.

Anti-requisite(s): You cannot take this module if you take CS5099

Learning and teaching methods of delivery:
- **Weekly contact:** Meetings with supervisor.
- **Scheduled learning:** 13 hours
- **Guided independent study:** 587 hours

Assessment pattern:
- **As used by St Andrews:** Coursework = 100%

Module teaching staff: TBC Module coordinator(s): Director of Postgraduate Teaching - Computer Science (dopgt-cs@st-andrews.ac.uk)

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**CS5099 Dissertation in Computer Science**

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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.

Pre-requisite(s): Requires admission to dissertation phase of msc and permission of the head of school

Anti-requisite(s): You cannot take this module if you take CS5098

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): Director of Postgraduate Teaching - Computer Science (dopgt-cs@st-andrews.ac.uk)
### IS5198 Group Project and Dissertation in Information Technology

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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.

**Anti-requisite(s)**
You cannot take this module if you take IS5199

**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 (Dissertation) = 100%

**Module teaching staff:**
TBC Module coordinator(s): Director of Postgraduate Teaching - Computer Science (dopgt-CS@st-andrews.ac.uk)

### IS5199 Dissertation in Information Technology

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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.

**Anti-requisite(s)**
You cannot take this module if you take IS5198

**Learning and teaching methods of delivery:**
- **Weekly contact:** Meeting with supervisor
- **Scheduled learning:** 12 hours
- **Guided independent study:** 588 hours

**Assessment pattern:**
As used by St Andrews:
Coursework (Dissertation) = 100%

**Module teaching staff:**
TBC Module coordinator(s): 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