1. **Programme title(s):**

MSc, Postgraduate Diploma and Postgraduate Certificate in

- Human Technology Interaction

MSc in

- Human Technology Interaction (with Industry)

2. **Awarding body or institution:**

University of Leicester

1. a) **Mode of study**
   Full-time

   b) **Type of study**
   Campus Based

2. **Registration periods:**

   a) **MSc October Intake**
   The normal period of registration is 12 months
   The maximum period of registration is 24 months

   b) **MSc January Intake**
   The normal period of registration is 16 months
   The maximum period of registration is 28 months

   c) **MSc with Industry October Intake**
   The normal period of registration is 21 months
   The maximum period of registration is 33 months

   d) **MSc with Industry January Intake**
   The normal period of registration is 24 months
   The maximum period of registration is 36 months

   e) **PG Diploma October Intake**
   The normal period of registration is 9 months
   The maximum period of registration is 18 months

   f) **PG Diploma January Intake**
   The normal period of registration is 12 months
   The maximum period of registration is 18 months

   g) **PG Certificate Intake**
   The normal period of registration is 6 months
   The maximum period of registration is 12 months

3. Typical entry requirements:

The same entry requirements that apply to all MSc programmes in Computer Science (with exception of the IELTS grade, see below) apply. Specifically, candidates should have, or expect to gain, at least a good second class honours BSc degree or qualification of equivalent standard recognised by the University in a subject with a substantial element of Computing. Applicants for the "with Industry" variant should have or expect to gain at least a very good second class honours BSc degree or qualification of equivalent standard recognised by the University in a subject with a substantial element of Computing. Because applications are treated on an individual basis, alternative qualifications may be considered, especially in the case of candidates with relevant work experience. Alternative qualifications are usually considered when a student holds an acceptable degree, but in a slightly different subject area and has through work experience moved into a field relevant for the programme they have applied for. In this case we would expect the experience to be significant (several years) and expect the candidate to provide details about this experience (e.g. details of the job they have been conducting in Industry) in addition to evaluating employer's statements for evaluation by the admissions team. Where English is not the first language of the candidate, the successful applicant must have IELTS 6.5.

4. Accreditation of Prior Learning:

n/a

5. Programme aims:

The general aims of all programme variants are to:

- Develop a deep understanding of the nature and impact of current challenges faced by the IT industry, so that students know what is expected from them as mature professionals.
- Develop an awareness of the methodologies and technologies that are available within Human-Computer Interaction (HCI) and relevant areas of Computer Science to address these challenges, so that students can evaluate and analyse specific situations and make informed choices.

In addition to the aims above, the PG Diploma and MSc aim to (see aspects for MSc only below):

- To foster confidence, convey knowledge and develop practical skills in the use of some of these technologies, including both fundamental concepts and state-of-the-art support tools.
- Provide experience of both team-based and individual project work.
- Encourage students to develop their interpersonal, communication, decision-making, and problem-solving skills, and to use these in an imaginative way.
- Train students in the analysis, design and evaluation of interactive products/systems/services to ensure their usability and user experience to address users' goals, needs and preferences, thereby helping to improve their quality of life through the use of technology. MSc students will apply this training in a significant individual project.
- Secure knowledge and research skills so that students are able to take their studies further to do a PhD, in case they complete the full MSc.

In addition to the aims above, the "with Industry" variant of the programme aims to:

- Enable first-hand experience of the requirements, opportunities and modes of operation of the programme related software engineering and computer industry;
- Place students on challenging and relevant industrial placements;
- Enable students to use and develop the knowledge and skills gained during the taught part of the programme;
- Develop students' career management and development skills.

6. Reference points used to inform the programme specification:

- University of Leicester Learning and Teaching Strategy 2011-2016

- University of Leicester Periodic Developmental Review Report
- External Examiners' reports (annual)
- QAA subject review [www.qaa.org]
- Subject Benchmark Statement for Master's Degrees in Computing [http://www.qaa.ac.uk/Publications/CircularLetters/Documents/QAA386_Computing.pdf]

7. Programme Outcomes:

Unless otherwise stated, programme outcomes apply to all awards specified in 1. Programme title(s).

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(a) Discipline specific knowledge and competencies		
Knowledge		
Demonstrate knowledge and mastery of a range of core and advanced (PGDip and MSc) theories, concepts, principles, and methodologies in HCI (usability, user experience, interaction design) and other advanced (PGDip and MSc) computing topics, and the way these concepts relate to IT practice (all). Integration of HCI and software engineering approaches (MSc).	Independent research (PGDip and MSc), lectures, and the seminar/discussion groups that are part of the Personal and Group Skills module.	Written examinations, oral presentations, participation in group discussions, essays/demos, project planning (PGDip, MSc) and dissertation (MSc).
Demonstrate understanding of the core elements of industrial practice and organisation ("with Industry").	Work placement ("with Industry").	Work placement report ("with Industry").
Concepts		
Demonstrate enhanced (MSc and PGDip) grasp of principles of computer science and HCI methodology and technology.	Independent research (PGDip and MSc), lectures, seminars, group-discussions.	Written examinations, assessed coursework, group essays, oral presentations, dissertation (MSc) and reports.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Techniques		
Master HCI design and evaluation techniques for the development of software- intensive, mobile and web-based systems, with specific focus on end-user participation and involvement. Use problem-solving techniques, and select and apply suitable technologies in different application areas such as education and healthcare (PGDip and MSc).	Independent research, lectures, seminars, group-discussions, along with laboratory work and individual project (MSc).	Written examinations, assessed coursework, group essays, oral presentations, dissertation (MSc) and reports.
Master research methods and project planning techniques.	Personal and Group Skills module, and individual project (MSc).	Individual project components (MSc); group discussions and essays.
Work as a Computer Scientist, Computer Engineer, Interaction Designer and User Experience Specialist in an industrial or commercial setting ("with Industry").	Work placement ("with Industry")	Work placement report ("with Industry")
Critical analysis		
Apply understanding of concepts and techniques with independence, rigour & self-reflexivity. PGDip and MSc will require greater depth and breadth than PGCert.	Independent research (PGDip and MSc), lectures, Personal and Group Skills module, and individual project (MSc).	Oral presentations, participation in group discussions, essays/demos, project plan (PGDip, MSc), dissertation (MSc), and work placement report ("with Industry").
Critically appraise problem solutions, and project work (MSc). Demonstrate consideration of professional issues.	As above.	As above.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Presentation		
Organise research material and/or technology demonstration; distinguish between relevant and non-relevant material; write-up and deliver oral reports on findings to a professional standard; engage in scientific discussion with peers (PGDip and MSc).	Lectures, seminars, group discussions. Personal and Group Skills module. Work placement ("with Industry").	Oral presentations, participation in group discussions, essays/demos, project plan (PGDip and MSc), and dissertation (MSc).
Appraisal of evidence		
Analyse and assess a variety of requirements for system development and/or engineering. Assess the relevance and quality of proposed methods, techniques and technologies (PGDip, MSc). Mount and sustain an independent level of inquiry at an advanced level (MSc).	Independent research (PGDip and MSc), lectures, seminars, group-discussion, and the Personal and Group Skills module.	Oral presentations, participation in group discussions, essays/demos, project plan (PGDip and MSc), and dissertation (MSc).
(b) Transferable skills		
Research skills		
Conduct significant background research and literature surveys (PGDip and MSc), organise and marshal evidence, report on findings, analyse complex ideas and construct critical arguments (for MSc these arguments are expected to be sophistiated).	Project supervision. Seminars, group discussions, collective essay, and specific workshops delivered by the Student Learning Centre.	Collective essay, group discussions, and individual project reports and dissertation (MSc).

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Communication skills		
Respond to scientific questions with accurate and concise answers. Demonstrate fluent and sustained scientific and technical communication (MSc).	Lectures, seminars, moderated group discussions, and individual project supervision (MSc). Workshops delivered by the Student Learning Centre. Work placement.	Group discussions and individual project presentations (MSc), individual project oral examinations (MSc), work placement presentation ("with Industry").
Write concise and accurate summaries of scientific knowledge, and solutions to problems, in a variety of different formats.	Lectures. Detailed solutions provided in problem classes. Workshops delivered by the Student Learning Centre. Individual project supervision.	Written examinations, assessed coursework, group essay, intermediate individual project reports and dissertation (MSc).
Produce properly structured, clear, advanced technical reports or dissertations.	As above.	Group essay. Intermediate individual project reports and dissertation (MSc).
Data presentation		
Organise and present information gathered through research clearly and effectively using appropriate IT resources.	Independent research. Lectures. Workshops delivered by the Student Learning Centre. Work placement.	Oral presentations, essays/demos, work placement report("with Industry"), and dissertation (MSc).
Working relationships		
Know how and when to draw on the knowledge & expertise of others; contribute and comment on ideas in syndicate groups.	Lectures. Group discussions and collective essay. Work placement.	Oral presentations, participation in group discussions, work placement report.
Managing learning		
Demonstrate independence and time management skills. Identifying a credible research project (PGDip and MSc), drawing up a realistic research time-table (PGDip and MSc), reflecting on and 'writing up' results (MSc).	Tutor system. Project supervision. Meeting coursework deadlines. Career development workshop delivered by the Student Learning Centre.	Collective essay, and individual project topic choice and plan (PGDip), intermediate reports and dissertation (MSc).
Career management		
Design a long-term personal career plan.	Personal and Group Skills career development workshops.	Discussions on career planning with Personal Tutor.
Experience and critically reflect on industrial practice (with industry only).	Placement	Placement report

8.   Special features

The courses share the compulsory Personal and Group Skills module which combines attendance of seminars especially commissioned from speakers selected for their presentation skills and state-of-

the-art research, group discussions and collective essay writing on topics selected for the seminars, as well as a series of workshops on transferable skills and career planning run by the Student Learning Centre of the University. This module forms a highly praised (by previous referees and the external examiners) component of the existing MSc offering in the Department and is well liked by the students.

The Department is research active in all areas covered by the programmes, which means that students will be able to benefit from the projects that are going on through special lectures, tutorials and discussions with national and international collaborators, as well as being able to conduct their projects in topics that are at the cutting edge of science and technology.

9. Indicators of programme quality

QAA subject review; external examiners report.

10. Scheme of Assessment:

As defined in Senate Regulation 6: Regulations governing taught postgraduate programmes of study.

11. Progression points

As defined in Senate Regulation 6: Regulations governing taught postgraduate programmes of study.

In cases where a student has failed to meet a requirement to progress he or she will be required to withdraw from the course and a recommendation will be made to the Board of Examiners for an intermediate award where appropriate.

Additionally, students on the "with Industry" programme are subject to the following two rules: (1) If students do not achieve an overall merit level or fail exams at the end of their first taught semester they will revert to the degree without industry; (2) If students fail to acquire a placement they will revert to the degree without industry.

12. Rules relating to re-sits or re-submissions:

Resits may only be taken when the exam for the module to be resat is offered in the following academic year (usually in the January and May/June exam periods). Specifically, there are no resits offered in September. Coursework resits (where applicable) are typically offered in the Easter break and during August.

13. External Examiners reports

To be included following receipt of first report.

14. Additional features (e.g. timetable for admissions)

Admissions are in October and January.

- Students admitted in October undertake their individual project during the summer of the following year and submit their dissertation in September (12 months in total).
- Students admitted in January start by following semester 2 modules and break during the summer; in October they follow semester 1 modules and start their project in the second half of February of the following year, submitting their dissertation at the end of May. Although this implies 16 months in total, only 12 are actually spent in the course.

Examinations are taken in January for first semester modules and in May/June for second semester ones.

Additionally, "With Industry" programmes will be longer as the placement, which can be either of 3, 6,8 or 12 months length depending on the interest of the student and the placement that can be secured, is an integral part of the programme and hence adds the respective time to the programme

length. Students will automatically be registered as if they were to take a 12 month placement and the length of study will be corrected when the placement is secured and the actual length of the placement is decided upon.

Students may transfer from this programme to other MSc programmes offered by the Department of Informatics, with the permission of the programme director and under advice from their personal tutor until the second week of their studies week 2 of each semester. Transfers should normally only take place when a student wishes to study modules that are not compatible with the specialisation chosen at registration or when the student wishes to take an individual project outside their specialization chosen at registration. If changing in their second or third semester students can only change onto programmes where they can meet the programme regulations concerning required core modules.

Appendix 1: Programme structure (programme regulations)

In line with the other MSc offerings in the Department of Informatics, there are three kinds of modules in the programmes. Details of the modules, including the semesters when they are delivered are shown in Table 1.

Personal and Group Skills (PGS) (15 credits)

This module is offered in both semesters and provides students with skills that are way up the value chain of any IT employer. Students attend a series of seminars given by researchers from universities or companies followed by group discussions moderated by a member of staff. Each group prepares a joint essay based on the seminar and the discussions. Students also attend workshops organised by the Student Learning Centre on topics like project planning, writing and presentation skills, as well as career management.

Taught Modules (105 credits)

Taught modules are taken to a total of 120 credits. The programme requires 90 credits of core modules, as indicated in Table 1 (with **C**). The remaining 30 credits are filled by selecting two more options from the remaining modules shown below.

Optional modules are chosen, with the support and advice of their personal tutor, before the end of the second teaching week of each semester. Some optional modules may have pre-requisites (e.g. experience in certain programming languages, mathematical maturity or research methods) and, therefore, unadvisable to certain students. Any such pre-requisite will be explicitly stated in the corresponding module form available in the student's handbook.

Note that CO7221 and CO7222 are offered in either semester to allow for students to take them in the right order – that is students on the October intake will take CO7221 in Sem 1 and CO7222 in Sem 2, while students from the January intake will take CO7221 in Sem 2 (which is their first semester) and CO7222 in Sem 1 (their second semester of study).

Individual Project (60 credits)

Candidates entitled to proceed to a full MSc degree undertake, after examinations, an individual project on an approved topic according to the profile of each course, leading to the submission of a 15,000 word dissertation. The project is expected to contain some element of original work, and may involve informal collaboration with other organisations, subject to the previous approval of the project supervisor. Projects will be offered for February and June start as well as October start to allow for students from each intake as well as students on industry placements to start a project without significant waiting periods. This is common practice in the other Informatics Masters programmes.

Module Code	CO7221	CO7222	CO7223	CO7224	CO7225	CO7095	CO7091	CO7093	CO7201	CO7210	CO7214	CO7215	CO7219
Level	7	7	7	7	7	3	3	3	7	7	7	7	7
Credits	15	15	15	15	15	15	15	15	60	15	15	15	15
Semester offered	1 + 2	1+ 2	1	1	2	1	1	2		1 + 2	2	1	1
Module Title	Research Methods and Theories in HCI	Research Trends in HCI	Interaction Design (ID) and User Experience (UX)	Mobile and Ubiquitous Computing	Service Design	Software Measurements and Quality Assurance	Computational Intelligence and Software Engineering	Big Data and Predictive Analytics	Individual Project	Personal and Group Skills	Service-Oriented Architectures	Advanced Web Technologies	Internet and Cloud Computing
	C	C	C	C	C				✔	C			

Appendix 2: Module specifications

See module specification database http://www.le.ac.uk/sas/courses/documentation