

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

MSc and Postgraduate Diploma and Postgraduate Certificate in

- Advanced Computer Science (ACS)

MSc and Postgraduate Diploma

- Advanced Software Engineering (ASE)

MSc in :

- Advanced Computer Science (ACS) with Industry
- Advanced Software Engineering (ASE) with Industry

**2. Awarding body or institution:**

University of Leicester

**3. a) Mode of study**

Full-time

**b) Type of study**

Campus Based

**4. 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 24 months

The maximum period of registration is 36 months

**d) MSc with Industry January Intake**

The normal period of registration is 28 months

The maximum period of registration is 40 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

### **5. Typical entry requirements:**

The same entry requirements that apply to all MSc programmes in Computer Science 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 6.0.

### **6. Accreditation of Prior Learning:**

n/a

### **7. Programme aims:**

The general aims of the programme leading to a PG Cert in Advanced Computer Science 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 computer science to address these challenges, so that students can evaluate and analyse specific situations and make informed choices.
- 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.
- Encourage students to develop their interpersonal, communication, decision-making, and problem-solving skills, and to use these in an imaginative way.

The programmes leading to an MSc have the following additional aims:

- Provide experience of both team-based and individual project work.
- 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.

Further, ASE has more focused specific aspects:

- ASE aims to train students in development methods and processes that address key challenges that companies are facing for competing in the volatile markets of today: How to generate applications from high-level business models to reduce time-to-market and development costs? How to evolve legacy systems and promote business processes in an economy dominated by the need to offer and integrate, on demand, new services?

The ‘year in industry’ variant of this programme is offered in accordance with the University’s [standard specification for year in industry programme variants](#).

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.

## 8. Reference points used to inform the programme specification:

- QAA Benchmark [Computing \(2011\)](#)
- QAA Frameworks for Higher Education Qualifications in England Wales and Northern Ireland
- QAA [Master's Degree Characteristics](#)
- PDR report (January 2010)
- [University Learning Strategy](#)
- University Employability Strategy
- Graduate Survey (2014)
- First Destination Survey
- External Examiner's Reports

## 9. Programme Outcomes:

Students undertaking the MSc or PG Diploma will engage with a broader range of subjects than those studying towards the PG Cert. MSc students are undertaking an individual project, which will require much deeper exploration and application of the learned skills than they would demonstrate in the PG Cert or PG Diploma. (MSc) and (PGDip) in the table below will indicate the LOs, methods and demonstration for aspects specific to the MSc or PG Diploma Programmes.

Learning Outcomes	Teaching Methods Subject and Professional Skills	How Demonstrated
<b>Knowledge</b>		
Demonstrate knowledge and mastery of a [wide (MSc)(PGDip)] range of advanced computer science subjects and the way they relate to IT practice. Integration of knowledge across subjects.	Independent research (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 and dissertation (MSc).
Demonstrate understanding of the core elements of industrial practice and organisation ("with Industry").	Work placement.	Work placement report.
<b>Concepts</b>		
Demonstrate enhanced grasp of principles of computer science methodology and technology.	Independent research, lectures, seminars, group-discussions.	Written examinations, assessed coursework, group essays, oral presentations, dissertation (MSc) and reports.
<b>Techniques</b>		

<p>Master advanced modelling and design techniques for the development of distributed, software intensive, and web-based systems.</p>	<p>Independent research, lectures, seminars, group-discussions, along with laboratory work and individual project (MSc).</p>	<p>Written examinations, assessed coursework, group essays, oral presentations, dissertation (MSc) and reports.</p>
<p>Engineer and follow software development processes, make use of model-based techniques, target service-oriented architectures.</p>	<p>As above.</p>	<p>As above.</p>

<b>Learning Outcomes</b>	<b>Teaching Methods</b>	<b>How Demonstrated</b>
<b>Techniques</b>		
Use problem-solving techniques, and select and apply suitable technologies in different application areas.	As above.	As above.
Apply current technologies in distributed systems engineering.	As above.	As Above.
Master research methods and project planning techniques (MSc).	Personal and Group Skills module, and individual project (MSc).	Individual project components (MSc); group discussions and essays.
Work as a Computer Scientist and Computer Engineer in an industrial or commercial setting (“with industry”).	Work placement	Work placement report.
<b>Critical analysis</b>		
Apply understanding of concepts and techniques with independence, rigour & self-reflexivity.	Independent research, lectures, Personal and Group Skills module, and individual project (MSc).	Oral presentations, participation in group discussions, essays/demos, project plan, dissertation (MSc), and work placement report.
Critically appraise problem solutions, and project work. Demonstrate consideration of professional issues.	As above.	As above.
<b>Presentation</b>		
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. These aspects are explored in more depth and with greater rigour by students studying for the MSc or PGDip.	Lectures, seminars, group discussions. Personal and Group Skills module. Work placement.	Oral presentations, participation in group discussions, essays/demos, project plan, and dissertation (MSc).
<b>Appraisal of evidence</b>		

Analyse and assess a variety of requirements for system development and/or engineering. Assess the relevance and quality of proposed methods, techniques and technologies. Mount (PGDip, MSc) and sustain (MSc) an independent level of inquiry at an advanced level.	Independent research, lectures, seminars, group-discussion, and the Personal and Group Skills module.	Oral presentations, participation in group discussions, essays/demos, project plan, and dissertation (MSc).
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<b>Learning Outcomes</b>	<b>Teaching Methods</b>	<b>How Demonstrated</b>
<b>Transferable skills</b>		
<b>Communication skills</b>		
Respond to scientific questions with accurate and concise answers. Demonstrate fluent and sustained scientific and technical communication.	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, individual project oral examinations (MSc), work placement presentation.
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 (MSc).	Written examinations, assessed coursework, group essay, intermediate individual project reports (MSc) and dissertation (MSc).
Produce properly structured, clear, advanced technical reports or dissertations (MSc).	As above.	Group essay. Intermediate individual project reports and dissertation (MSc).
<b>Data presentation</b>		
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, and dissertation (MSc).
<b>Working relationships</b>		
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.
<b>Research skills</b>		
Conduct [significant (MSc, PGDip)] background research and literature surveys, organise and marshal evidence, report on findings, analyse complex ideas and construct [sophisticated (MSc)] critical arguments.	Project supervision (MSc). 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).
<b>Managing learning</b>		



<p>Demonstrate independence and time management skills.</p> <p>Identifying a credible research project, drawing up a realistic research time-table, reflecting on and 'writing up' results. Design a long-term personal career plan (MSc).</p>	<p>Tutor system. Career development workshop delivered by the Student Learning Centre.</p> <p>Project supervision (MSc).</p>	<p>Meeting coursework deadlines. Collective essay.</p> <p>Individual project topic choice and plan, intermediate reports and dissertation (MSc).</p>
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## **10. Special features:**

Each course shares the compulsory Personal and Group Skills 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. The areas covered by the programmes are directly related to the specific research strength in the department, in the areas of Service Oriented Computing (Sensoria and in Context) and Agile Methods (Leg2Net, Segravis) where the department has a significant international recognition.

## **11. Indications of programme quality:**

QAA subject review; external examiners report.

## **12. Scheme of Assessment**

This programme follows the rules and procedures set by the University for postgraduate programmes. See: Senate Regulation 6 governing taught postgraduate programmes  
<http://www2.le.ac.uk/offices/sas2/regulations/general-regulations-for-taught-programmes>

Students on Advanced Software Engineering, who only achieve sufficient credits for the award of a postgraduate certificate will not have met the Learning Outcomes for a PG Cert in their named degree specialism and hence are only eligible for a PG Cert in Advanced Computer Science as an exit award.

## **13. Progression points**

The programme will follow the standard University progression rules, as defined in the Scheme of Assessment. See: Senate Regulation 6 governing taught postgraduate programmes  
<http://www2.le.ac.uk/offices/sas2/regulations/general-regulations-for-taught-programmes>

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 three 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. A Progression Board of Examiners will be held after the students’ first semester, which will determine if students remain on the “with industry” variant of their programme. (2) If students fail to acquire a placement they will revert to the degree without industry. (3) Failure to satisfactorily perform (attendance, participation and completion of set tasks) in the employability programme (modules ADCO7221 and ADCO7222) will lead to being moved to the degree without industry.

## **14. Rules relating to re-sits or re-submissions:**

This programme follows the rules and procedures set by the University for postgraduate programmes. See: Senate Regulation 6 governing taught postgraduate programmes  
<http://www2.le.ac.uk/offices/sas2/regulations/general-regulations-for-taught-programmes>  
noting that resits may only be taken when the exam for the module to be resat is offered again.

Resit examinations for modules examined in January are offered in the Midsummer exam period, and resit examinations for modules examined in the Midsummer exam period are offered in September.

#### **15. Additional information** [e.g. timetable for admissions]

Admissions are in September and January.

- Students admitted in September 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 September 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 of 3, 6, 9 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 week 2 of each semester. Transfers should normally only take place when a student wishes to study modules that are not compatible with the specialization chosen at registration or when the student wishes to take an individual project outside their specialization chosen at registration.

#### **16. External Examiners**

The details of the External Examiner(s) for this programme and the most recent External Examiners’ reports can be found [here](#).

#### **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 105 credits in a mixture of core and optional modules as indicated in Table 1.

Optional modules are chosen, with the approval of the 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 or mathematical maturity) and, therefore, inadvisable to certain students. Any such pre-requisite will be explicitly stated in the corresponding module form available in the student's handbook.

### 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.

### Employability Programme (with industry only, compulsory but non-credit bearing)

Candidates on with Industry variants of the programmes will be required to undertake study of two additional modules that equip them with skills and knowledge about the labour market and preparing them for applying for and undertaking placements. ADCO7221 and ADCO7222 are compulsory for 'with industry' students.

Table 1.

Module code	CO7002	CO7091	CO7093	CO7095	CO7099	CO7102	CO7105	CO7200	CO7201	CO7207	CO7210	CO7214	CO7215	CO7217	CO7219	CO7223	CO7224	CO7225
Level	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Credits	15	15	15	15	15	15	15	15	60	15	15	15	15	15	15	15	15	15
Semester offered	2	1	2	1	2	1	1	2		2	1 + 2	2	1	1	1	1	1	1
Module Title	Analysis and Design of Algorithms	Computational Intelligence and Software Engineering	Big Data and Predictive Analytics	Software Measurements and Quality assurance	Foundations of Cybersecurity	Mobile and Web Applications	Advanced C++ Programming	Algorithms for Bioinformatics	Individual Project	Generative Development	Personal and Group Skills	Service-Oriented Architectures	Advanced Web Technologies	Agile Cloud Automation	Internet and Cloud Computing	User Experience and Interaction Design	Mobile and Ubiquitous Computing	Service Design
ACS																		
ASE				C						C		C						

## Programme Regulations (Programme Structure)

### MSc in Advanced Software Engineering

#### Updates to the programme

Academic year affected	Module Code(s)	Update
2022/ 23	CO7007 Communication and Concurrency	Removed optional module
2022/23	CO7218 Financial Services Information Systems	Removed optional module
2022/23	MA7071 Financial Mathematics I	Removed optional module

#### SEMESTER 1

<b>Core Modules</b>		<b>Credits</b>
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CO7095	SOFTWARE MEASUREMENT AND QUALITY ASSURANCE	15
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#### Optional Modules

Select 45 credits from:

CO7210	PERSONAL AND GROUP SKILLS*	15
CO7091	COMPUTATIONAL INTELLIGENCE AND SOFTWARE ENGINEERING	15
CO7102	MOBILE AND WEB APPLICATIONS	15
CO7105	ADVANCED C++ PROGRAMMING	15
CO7215	ADVANCED WEB TECHNOLOGIES	15
CO7217	AGILE CLOUD AUTOMATION	15
CO7219	INTERNET AND CLOUD COMPUTING	15
CO7223	USER EXPERIENCE AND INTERACTION DESIGN**	15
CO7224	MOBILE AND UBIQUITOUS COMPUTING**	15
MA7077	OPERATIONAL RESEARCH	15

**Semester Total 60**

#### SEMESTER 2

<b>Core Modules</b>		<b>Credits</b>
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CO7207	GENERATIVE DEVELOPMENT	15
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CO7214	SERVICE ORIENTED ARCHITECTURES	15
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#### Optional Modules

30 credits selected from:

CO7210	PERSONAL AND GROUP SKILLS* (if not selected in semester 1)	15
CO7002	ANALYSIS OF ALGORITHMS	15
CO7093	BIG DATA AND PREDICTIVE ANALYSIS	15
CO7099	FOUNDATIONS OF CYBERSECURITY	15
CO7200	ALGORITHMS FOR BIOINFORMATICS	15
CO7225	SERVICE DESIGN	15

**Semester Total 60**

#### SUMMER

<b>Core Modules</b>		<b>Credits</b>
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CO7201      INDIVIDUAL PROJECT

60

**Total Credits**

**180**

\* All students are required to study CO7210, however may select to study it in either semester 1 or semester 2

\*\* Students cannot choose both CO7223 and CO7224 unless they change course to MSc HTI.

**JANUARY ENTRY****SEMESTER 2****Core Modules**

CO7207	GENERATIVE DEVELOPMENT	15
CO7214	SERVICE ORIENTED ARCHITECTURES	15

**Optional Modules**

30 credits selected from:

CO7210	PERSONAL AND GROUP SKILLS*	15
CO7002	ANALYSIS OF ALGORITHMS	15
CO7093	BIG DATA AND PREDICTIVE ANALYSIS	15
CO7099	FOUNDATIONS OF CYBERSECURITY	15
CO7200	ALGORITHMS FOR BIOINFORMATICS	15
CO7225	SERVICE DESIGN	15

**Semester Total 60****SEMESTER 1****Core Modules**

CO7095	SOFTWARE MEASUREMENT AND QUALITY ASSURANCE	15
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**Optional Modules**

Select 45 credits from:

CO7210	PERSONAL AND GROUP SKILLS* (if note selected in semester 2)	15
CO7091	COMPUTATIONAL INTELLIGENCE AND SOFTWARE ENGINEERING	15
CO7102	MOBILE AND WEB APPLICATIONS	15
CO7105	ADVANCED C++ PROGRAMMING	15
CO7215	ADVANCED WEB TECHNOLOGIES	15
CO7217	AGILE CLOUD AUTOMATION	15
CO7219	INTERNET AND CLOUD COMPUTING	15
CO7223	USER EXPERIENCE AND INTERACTION DESIGN**	15
CO7224	MOBILE AND UBIQUITOUS COMPUTING**	15
MA7077	OPERATIONAL RESEARCH	15

**Semester Total 60****JANUARY TO APRIL****Core Modules**

CO7201	INDIVIDUAL PROJECT	60
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**Total Credits 180**

\* All students are required to study CO7210, however may select to study it in either semester 1 or semester 2

\*\* Students cannot choose both CO7223 and CO7224, unless they change course to MSc HTI.

**MSc in Advanced Software Engineering with Industry**

The taught modules for the programme are as for those on the MSc in Advanced Software Engineering degree programme, with the additional undertaking of:

October entry

Semester 1

ADCO7221	Placement Preparation 1	0
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Semester 2

ADCO7222	Placement Preparation 2	0
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January entry

Semester 2

ADCO7221	Placement Preparation 1	0
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Semester 1

All students on the 'with Industry' variant will undertake a 3, 6, 8 or 12 month placement between completion of the taught element of the programme and commencement of the project. The placement will be assessed on a pass or fail basis according to the approved and published criteria. Students who are deemed to have passed the industrial placement and subsequently pass the individual project will be eligible to be considered for the award of an MSc in Advanced Software Engineering with Industry. Students who fail to pass the industrial placement will revert to the non- industry variant of the programme.



September Entry:

<b>SEMESTER 1</b>		<b>Credits</b>
<b>Optional Modules</b>		
60 credits selected from:		
CO7210	PERSONAL AND GROUP SKILLS*	15
CO7091	COMPUTATIONAL INTELLIGENCE AND SOFTWARE ENGINEERING	15
CO7095	SOFTWARE MEASUREMENT AND QUALITY ASSURANCE	15
CO7102	MOBILE AND WEB APPLICATIONS	15
CO7105	ADVANCED C++ PROGRAMMING	15
CO7215	ADVANCED WEB TECHNOLOGIES	15
CO7217	AGILE CLOUD AUTOMATION	15
CO7219	INTERNET AND CLOUD COMPUTING	15
CO7223	USER EXPERIENCE AND INTERACTION DESIGN**	15
CO7224	MOBILE AND UBIQUITOUS COMPUTING**	15
MA7077	OPERATIONAL RESEARCH	15
<b>Semester Total</b>		<b>60</b>
<b>SEMESTER 2</b>		<b>Credits</b>
<b>Optional Modules</b>		
60 credits selected from:		
CO7210	PERSONAL AND GROUP SKILLS* (if not selected in semester 1)	15
CO7002	ANALYSIS OF ALGORITHMS	15
CO7093	BIG DATA AND PREDICTIVE ANALYSIS	15
CO7099	FOUNDATIONS OF CYBERSECURITY	15
CO7200	ALGORITHMS FOR BIOINFORMATICS	15
CO7207	GENERATIVE DEVELOPMENT	15
CO7214	SERVICE ORIENTED ARCHITECTURES	15
CO7225	SERVICE DESIGN	15
<b>Semester Total</b>		<b>60</b>
<b>SUMMER</b>		<b>Credits</b>
<b>Core Modules</b>		
CO7201	INDIVIDUAL PROJECT	60
<b>Total Credits</b>		<b>180</b>

\* All students are required to study CO7210, however may select to study it in either semester 1 or semester 2

\*\* Students cannot choose both CO7223 and CO7224, unless they change course to MSc HTI.

**January Entry:****SEMESTER 2**

<b>Optional Modules</b>		<b>Credits</b>
<b>Optional Modules</b>		
60 credits selected from:		
CO7210	PERSONAL AND GROUP SKILLS*	15
CO7002	ANALYSIS OF ALGORITHMS	15
CO7093	BIG DATA AND PREDICTIVE ANALYSIS	15
CO7099	FOUNDATIONS OF CYBERSECURITY	15
CO7200	ALGORITHMS FOR BIOINFORMATICS	15
CO7207	GENERATIVE DEVELOPMENT	15
CO7214	SERVICE ORIENTED ARCHITECTURES	15
CO7225	SERVICE DESIGN	15
<b>Semester Total</b>		<b>60</b>

**SEMESTER 1**

<b>Optional Modules</b>		<b>Credits</b>
60 credits selected from:		
CO7210	PERSONAL AND GROUP SKILLS* (if not selected in semester 2)	15
CO7091	COMPUTATIONAL INTELLIGENCE AND SOFTWARE ENGINEERING	15
CO7095	SOFTWARE MEASUREMENT AND QUALITY ASSURANCE	15
CO7102	MOBILE AND WEB APPLICATIONS	15
CO7105	ADVANCED C++ PROGRAMMING	15
CO7215	ADVANCED WEB TECHNOLOGIES	15
CO7217	AGILE CLOUD AUTOMATION	15
CO7219	INTERNET AND CLOUD COMPUTING	15
CO7223	USER EXPERIENCE AND INTERACTION DESIGN**	15
CO7224	MOBILE AND UBIQUITOUS COMPUTING**	15
MA7077	OPERATIONAL RESEARCH	15
<b>Semester Total</b>		<b>60</b>

**JANUARY TO APRIL**

<b>Core Modules</b>		<b>Credits</b>
CO7201	INDIVIDUAL PROJECT	60
<b>Total Credits</b>		<b>180</b>

\* All students are required to study CO7210, however may select to study it in either semester 1 or semester 2

\*\* Students cannot choose both CO7223 and CO7224, unless they change course to MSc HTI.

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**MSc in Advanced Computer Science with Industry**


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The taught modules for the programme are as for those on the MSc in Advanced Computer Science degree programme, with the additional undertaking of:

October entry

Semester 1

ADCO7221	Placement Preparation 1	0
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Semester 2

ADCO7222	Placement Preparation 2	0
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January entry

Semester 2

ADCO7221	Placement Preparation 1	0
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Semester 1

All students on the 'with Industry' variant will undertake a 3, 6, 8 or 12 month placement between completion of the taught element of the programme and commencement of the project. The placement will be assessed on a pass or fail basis according to the approved and published criteria. Students who are deemed to have passed the industrial placement and subsequently pass the individual project will be eligible to be considered for the award of an MSc in Advanced Computer Science with Industry. Students who fail to pass the industrial placement will revert to the non-industry variant of the programme.

**Appendix 2: Module Specifications**

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