Template C4

Programme Specification

Title of Course: *MSc Information Systems*

Date first produced	01/01/2012
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Version number	5
Faculty	Faculty of Engineering, Computing and the Environment
School	School of Computer Science and Mathematics
Department	Department of Computer Science
Delivery Institution	Kingston University

This Programme Specification is designed for prospective students, current students, academic staff and employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes and content of each modules can be found in the course VLE site and in individual Module Descriptors.

SECTION 1: GENERAL INFORMATION

Award(s) and Title(s): *Up to 10 pathways*	MSc Information Systems
Intermediate Awards(s) and Title(s): *There are 4 Intermediate awards for each pathway*	PgDip PgCert
Course Code *For each pathway and mode of delivery*	
UCAS code *For each pathway*	N/A

Award(s) and Title(s): *Up to 10 pathways*	MSc Information Systems with Professional Placement
Intermediate Awards(s) and Title(s): *There are 4 Intermediate awards for each pathway*	PgDip PgCert
Course Code *For each pathway and mode of delivery*	
UCAS code *For each pathway*	

RQF Level for the Final Award:	Masters award level 7
Awarding Institution:	Kingston University
Teaching Institution:	Kingston University
Location:	Penrhyn Road
Language of Delivery:	English
Modes of Delivery:	Part-time Full-time
Available as:	
Minimum period of registration:	Part-time - 2 Full-time - 1
Maximum period of registration:	Part-time - 4 Full-time - 2
Entry Requirements:	Applicants for the MSc and Postgraduate Diploma are normally required to have a good honours degree in a numerate discipline including (but not limited to) computing, computer

| | science, IT, information systems, software engineering, economics, communications, business and/or management studies or similar.

Exceptionally applicants with qualifications that do not meet the requirements, but with considerable relevant professional experience will be considered.

Both of these types of applicants will benefit from the advanced and specialised nature of the technical and business knowledge covered in the course that is designed to build on the knowledge they already possess.

Overseas students are required to demonstrate that they have reached an equivalent academic standard as those required for home students.

Language Requirements

IELTS – minimum 6.5, with a minimum of 6.0 in each component is required for those for whom English is not their first language. |
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| **Programme Accredited by:** | BCS The Chartered Institute for IT |
| **QAA Subject Benchmark Statements:** | *All subject benchmark statements can be found here. For PG provision where there is no QAA subject benchmark make reference to the QAA Master's Degree Characteristics.*

Computing and Mathematics at master's level |
| **Approved Variants:** | **None** |
| **Is this Higher or Degree Apprenticeship course?** | |

For Higher or Degree Apprenticeship proposals only	
Higher or Degree Apprenticeship standard:	n/a

Recruitment, Selection and Admission process:	n/a
End Point Assessment Organisation(s):	n/a

SECTION 2: THE COURSE

A. Aims of the Course

The Aims of the Course are to enable students to:

- Gain knowledge, skills and a critical appreciation of the principles of Information Systems and Information Technology (IS/IT)

- Critically evaluate business and technical systems and their specifications.

- Demonstrate and engage in academic and professional communication with others in the IS/IT field through reports and presentations.

- Critically make an informed assessment of the performance of a system and make knowledgeable suggestions for improvements.

- Gain professional attitudes and a range of transferable skills which would enable them to develop and exploit their knowledge and technical expertise in the furtherance of their career.

- Develop an awareness of working in a multi-disciplinary team within the industry with real industrial constraints.

- Initiate, plan and develop research and investigative skills and a critical and research-oriented approach to the study of a relevant project.

- Give students on the 2 year version an opportunity to develop further skills, preparing them for higher levels of employment.

The course is ideal for students who are interested in developing and applying problem-solving skills to real world problems, who would like to develop their understanding of building information systems that directly adds value to the business. With a balance of theory and practical application, this course builds on knowledge in relevant areas of business strategy, information Systems and database management analysis design and implementation. Students will have the ability to apply specialised knowledge and skills to the analysis and development of appropriate and sometimes novel solutions to problems encountered in the business environment. The course will also extend the student's knowledge and skills into key areas of general management and develop the skills to lead teams incorporating software engineering specialists, and systems architects, as well as other IT professionals like IT Consultants. The Destinations and Leavers survey indicates that graduates from this programme go onto the following careers:

Entrepreneur -Start own company
Information architect
Business analyst
Requirements engineer
Consultant

Data Analysts	
Digital Media and Ecommerce	
Project Managers	

B. Intended Learning Outcomes

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The programme learning outcomes are the high-level learning outcomes that will have been achieved by all students receiving this award. They must align to the levels set out in the ['Sector Recognised Standards in England'](#) (OFS 2022).

Programme Learning Outcomes

	Knowledge and Understanding On completion of the course students will be able to:		Intellectual Skills On completion of the course students will be able to		Subject Practical Skills On completion of the course students will be able to
A1	The application of modern technologies available within the IT industry.	B1	Learn independently, think logically and critically and demonstrate a systematic approach to problem-analysis and to finding solutions	C1	Select and use effectively a wide range of methods, tools and techniques used in the design and development of Information Systems
A2	Extrapolating current methods, techniques and tools to identify new concepts, problems and future requirements in the IT/IS sector.	B2	Learn independently, and be able to critically evaluate, analyse and communicate research and data collection and analysis.	C2	Perform the practical work of designing and implementing information systems projects in a professional context including such aspects as appreciating the legal implications of Intellectual Property Rights and data protection
A3	Project finance, and the management and techniques used for pricing and cost control in order to produce successful outcomes.	B3	Analyse problems and issues, taking due account of any incompleteness of data or information, and arrive at well-reasoned and supportable conclusions	C3	Review aspects of an existing system and proposed IS related solutions to the satisfaction of the client
A4	How to control projects in respect to time, cost and the risks inherent in IT.	B4	Carry out a focused critical literature review	C4	Demonstrate an ability to undertake academic and professional communication through reports and presentations
A5	Legal obligations and financial, social and ethical implications of professional practice, including security and privacy issues and appropriate professional codes of practice.	B5	Identify current issues and trends in the IT/IS industry.	C5	Develop the professional attitudes and technical and business skills necessary to the furtherance of their careers in ICT management

A6	The principles and detailed requirements for the management of quality issues in respect to the industry projects.	B6	Develop original thought.	C6	Work as an effective team member
A7	The nature, scope and objectives of the varying organisations and inter-firm relationships that are present in the industry, particularly relating to efficient outcomes.	B9	Build upon the experience and responsibility gained as a result of the practical application of the skills acquired during the course to make a significant contribution as a computing or information systems professional within an organization	C7	Prepare basic business plans appropriate to the environment
A8	Technical systems and specifications.	B10	Analyse, specify and design information systems architecture as appropriate and consider necessary technology requirements to fulfil the needs of the business domain.	C8	Specify information systems that meets the needs and aspiration of the users,
A9	Information systems project management using Agile methods and techniques.			C9	Assess the quality of information systems and optimise the process of development.
A10	Information Systems development including techniques to analyse, design, implement, perform analytics and manage the use of information systems between businesses, consumers and government, it will also focus on User Experience in the design of information systems			C10	Specify ecommerce systems that meet the needs and aspiration of the users.

In addition to the programme learning outcomes, the programme of study defined in this programme specification will allow students to develop the following range of Graduate Attributes:
1. Creative Problem Solving
2. Digital Competency
3. Enterprise
4. Questioning Mindset
5. Adaptability
6. Empathy
7. Collaboration
8. Resilience
9. Self-Awareness

C. Outline Programme Structure

This course is part of the University's Postgraduate Regulations (PR). Courses in the PR are made up of modules that are designated at level 7. Single taught modules in the courses are valued at 30 credits and the course contains a project that has 60 credits. The minimum requirement for a Postgraduate Certificate is 60 credits, for a Postgraduate Diploma 120 credits and a Masters Degree 180 credits.

The course offers the PG Certificate as an exit award only and is based on the student passing any coherent subset of the taught modules.

The awards available are detailed in section A and the requirements are outlined below. All students will be provided with the PR regulations in the student handbook.

The Courses are offered as 1 year full-time, and normally 2-3 years part-time. The modules are offered as two, 1-week blocks several weeks apart. The full MSc course consists of an induction programme, 4 modules, and the project.

Full-time students will complete the programme of study and assessment in 52 weeks. The normal study pattern for part-time students is that they should complete 4 modules over a two to three year period and complete their project within the same period. Because of the structure of the course, part-time students may be able to commence the course at different times during the academic year after discussion with the Course Leader of relevant issues, including the need for specific preparatory study.

Normally, each module will include approximately 60 hours contact time, followed by directed learning resulting in a total of 300 hours of student effort. The project is the equivalent of two modules and requires 600 hours of student effort.

Planning meetings will take place at the beginning of each teaching block to ensure there is no assessment overloading or bunching.
The course design fully considers all student groups. Delivery in 1-week blocks separated by several weeks enables part-time students to study whilst also meeting

their other commitments. Overseas students are also able to complete their degree within visa limitations.

To address advanced ethics and professional issues, these issues are addressed within the context of technical core modules taken before the project is conducted, specifically, within Agile Project Development, and the Individual Project.

The programming is made up of four modules each worth 30 credit points plus a individual project worth 60 credits.   All students will be provided with the University regulations and specific additions that are sometimes required for accreditation by outside bodies (e.g. professional or statutory bodies that confer professional accreditation). Full details of each module will be provided in module descriptors and student module guides.

Students starting the course in September, January or March will be able take 10-12 month placement after completing their project. In all cases, the suitability of the placement requires approval of the Course Leader.

Students on placement must complete a portfolio assessment which includes a reflection on how the theories they have learnt during their teaching year have helped them in their placement and demonstrate ability to apply their teaching in a real world situation.

MSc Information Systems

Level 7							
MSc Information Systems							
Core modules	**Module code**	**Credit Value**	**Level**	**Teaching Block**	**Pre-requisites**	**Full Time**	**Part Time**
Agile Project Development	CI7350	30	7	2			
Business in Practice	CI7600	30	7	2			
Databases and Data Management	CI7320	30	7	TB2		1	1
IT and Entrepreneurship	CI7240	30	7	1			
Project Dissertation	CI7000	60	7	1 & 2			
Optional Modules							

Level 7							
MSc Information Systems with Professional Placement							
Core modules	**Module code**	**Credit Value**	**Level**	**Teaching Block**	**Pre-requisites**	**Full Time**	**Part Time**
Professional Placement	CI7900	120	7	1 AND 2		0	0
Optional Modules							

D. Principles of Teaching, Learning and Assessment

Students on postgraduate courses in the School of CSM come from diverse social, cultural and educational backgrounds and their past learning experiences are varied. The School's broad strategy of aiming for problem-centred teaching and accessible, relevant (authentic) artefact-based assessment (assessment of learning by doing/creating) was created in recognition of this. The course adopts the University's Inclusive Curriculum Design Principles to cater for this diversity and define the approaches to learning, teaching and assessment (LTA), pastoral care and employability with the following broad principles:

1. An inclusive curriculum with the student at the heart of the learning process encouraging choice in their focussed topics for investigation within the prescribed module assignment formats (where practical) and sharing experiences and perspectives within the course through discussion and presentation of results.
    *   Module descriptors adopt problem-centred approaches which in turn facilitate an inclusive learning environment.
    *   Curricula and approaches to LTA allow for expression of cohorts' experiences and perspectives, ultimately for sharing and shaping understanding together. Modules and the dissertation challenge students' epistemological and ontological approaches to the study of Information systems, including software and its legal, social and ethical aspects, data presentation and the impact on society and the interpretation of business strategy and the development of information systems to support the business. Also to develop approaches to critical evaluation of current and future knowledge.
    *   Teaching sessions are problem-centred, predominantly workshop-based, and necessarily interactive to make best use of the intensive weeks of study interspersed with directed study. Workshops and the use of the VLE (or other cohort-inspired networking tools) allow students to investigate and share their understanding of new concepts, techniques and technologies. This approach is also designed to enhance their practical competency and confidence when dealing with a range of "users" (recognising the diversity of Information Systems teams and roles).

- The delivery is research informed, taking advantage of CSM's diverse research portfolio, dynamically updated in accordance with advances in the field.
- Modules incorporate opportunities to explore current developments in the field, in practice and applied settings incorporating student perspectives, real world situations, problem solving and task based learning. Content includes the opportunity for students to personalise the topics being explored and allow them to adapt summative assessments towards their personal interests and motivations, where practical
- Teaching teams draw on the academic strengths and research interests of staff and use invited speakers and experts from research and industry to bolster the curriculum. This offers students up-to-date learning experiences from experts in these areas.
- Students complete their MSc by conducting an individualised capstone research project, designed in collaboration with the Information Systems team.

2. Assessment *for* learning (rather than solely *of* learning) enabling an inclusive student perspective in their design and application, permitting a degree of individual choice and direction for assessed tasks work.

- All assessments have been designed at level 7, as appropriate for the Information System MSc, to be inclusive, accessible, artefact-based and authentic to the field.
- Students' induction at the start of the course includes an introduction to the language of UK HEI assessment and the tools used to measure the quality of their academic performance.
- The assessment strategy aims to incorporate an element of choice within a carefully designed framework of assessments that align with the diversity of a Information Systems' student needs, and thus encourages students to be personally involved in their assessments. For example, students will have opportunities to choose to work with datasets reflecting their specialism or areas of interest in coursework assignments, provided the data is publicly available and appropriately licensed.
- Students have formative tasks and feedback available within the workshops preceding all assessments. Teaching sessions adopt a range of activities (including practical tasks, case studies, group discussion, role play) to enrich the learning experience in a problem-centred, predominantly workshop-based setting, which directly supports the formulation of summative assessments.
- Feedback on both formative tasks and summative work enables students to learn from assessment experiences, reflect alongside directed study and feed-forward that learning to future assessments, most critically to the final dissertation project.

3. An approach to the personal tutor system appropriate to the Information Systems MSc, which provides opportunities for students to personalise their experience and track their academic and personal skills development.

- The Course Leader is the nexus of the postgraduate personal tutor system and normally acts as the formal Personal Tutor, supported day-to-day during intensive week-block teaching by the course's module leaders.

- Students will have a Dissertation Supervisor from the Information Systems team and in cases where that is the Course Leader, an independent Personal Tutor will also be appointed so that all students have the opportunity for independent pastoral and academic advice.
- The Course Leader and/or Personal Tutor will meet with Information Systems students regularly to provide guidance on assessment and personal development choices, discuss progress on the course, career plans, goals, development and recognition of personal and graduate attributes.

The assessment during the Professional Placement year will include a reflective practice piece of work supported by evidence of achievement, and the employer's appraisal. The performance and attendance will be regularly monitored through the placement year. The marking of the placement is "pass" or "fail".

E. Support for Students and their Learning

Postgraduate students are supported by:

- A detailed induction programme in the first week of enrolment which includes mathematics and programming background diagnostics and support for students with diverse academic backgrounds. For example:
- SEC Academic Success Centre (SASC), which supports students in their academic skills, English language, assessment and feedback interpretation, through daily drop-ins as well as online through the VLE (Canvas). For CSM students in particular (but open to all) SASC incorporates:
  - o Programming Aid for drop-in software development support; and
  - o MathsAid for mathematics and statistics support.
  Both are run by CSM academic staff or postgraduate & PhD students.
  - o Advice on generic study skills is also available on the VLE (Canvas), to which all students have access; this includes advice on writing, oral communication, numeracy, problem-solving and career management, amongst others.
- The Course Leader-led Personal Tutor Scheme aims to help students in their studies, with a combination of staff and peer support. It is recognised that students studying the MSc Information Systems come from a variety of backgrounds, including those who are in employment, returning to study after a break, recent graduates from Kingston University and other UK institutions and international students. These various experiences and backgrounds contribute to the peer support built into the Personal Tutor Scheme. At the beginning of the year and throughout, tutors and students will discuss: available resources to help students getting started at Kingston University and transitioning from undergraduate to postgraduate study; maths aid, employability, *CV* and cover letter writing, and 'skills gap analysis'; academic

progress during studies, including formative and summative feedback and how this can be used to feed-forward to improve performance; and preparation for the research project.

- Students are encouraged to discuss academic and pastoral concerns with their Course Leader. All academic staff operate a system of open office support hours during which students can consult with their lecturers. Additional assistance is also available through the Union of Kingston Students, the Dyslexia and Disability Support Office, and the Careers & Employability Service.
- Elected/appointed Student Representatives who can report to the Student Staff Consultative Committee meetings with feedback from students on the course specific to the modules and the course in general.

Additional support is available for students undertaking a placement.

- While the responsibility for finding and securing a professional placement rests ultimately with the students, those who are intending to undertake a placement are supported by a comprehensive structured programme of activities and events designed to help them. This starts with an additional separate day of induction at the start of the course (over and above the induction for other students) – introducing some of the fundamentals of career development and job-hunting, as well as the place of the professional placement module within the academic structure. After induction students follow, over a few months, a scheduled programme of assignments (built into the module structure in Canvas) including personal awareness/development portfolio, *CV* writing, and commercial awareness research, combined with webinars and workshops on such things as building a personal brand in LinkedIn as well as networking events. This is supported by a placements team within the Faculty who, in addition to helping source potential placement job opportunities and expanding the University's pool of employer contacts, work with students to help them utilise the resources available and complete the assignments. In addition, staff from the University's Careers and Employability team introduce all of their facilities and resources and also work with the students in one-to-one sessions e.g. for *cv* review. As well as acting as consultants, support staff also visit the students in timetabled sessions for 'maximum exposure' and students who have completed the placement in the past are also invited back for presentations and Q & A sessions.
- The appropriateness of placement positions is vetted by the Course Leader and while out on placement students are supported by a placement tutor who monitors progress and visits the students on site.
- The aim from start to finish is to ensure that students have a successful and rewarding placement experience which develops their knowledge and skills and prepares them for higher levels of employment.

F. Ensuring and Enhancing the Quality of the Course

The University has several methods for evaluating and improving the quality and standards of its provision. These include:

- External examiners
- Student-Staff Consultative Committees (SSCC)
- Boards of Study with student representation

- Annual Monitoring and Enhancement
- Internal Subject Review undertaken at subject level
- Student evaluation including MEQs
- Moderation policies
- Feedback from employers

G. Employability and work-based learning

Computing qualifications are amongst the most versatile and enable graduates to find employment in a wide spectrum of careers ranging from systems and business analysts, and software engineers, through to programmers and network specialists in a wide range of public and private sector industries. Recent graduates found employment with large organisations such as IBM, Hewlett Packard, Capgemini, JDA Software, Thomson Reuters, GlaxoSmithKline, Axa, BAA, British Telecom, Ernst & Young, Marks & Spencer, Waitrose, Virgin Media, NHS Institute for Innovation and Improvement, Cognizant, JP Morgan, as well as a host of smaller companies. Graduates also pursue careers in academia joining universities such as Kingston University's PhD programmes in information systems, Big Data, enterprise modelling, business intelligence, ecommerce, digital imaging, computer forensics, and user experience.

Our curriculum is largely applied in nature with many case studies chosen for their topicality and relevance to industry such as information systems design, programming, networking, and implementation issues. Working on case studies designed to simulate the working environment, typically in teams, gives students experience of applying their computing, information systems and networking methods and key skills to open-ended problems with complex solutions, and presenting their findings, including any limitations, in a professional manner. This mirrors the experience of computing professionals working in commerce and industry. To further set the material in context as well as inspire our students, leading practitioners from industry, such as Google and IBM are invited to give guest lectures and workshops. Throughout the course students develop communication and interpersonal skills, learn time management and the value of prioritising and planning by involvement in the learning activities outlined in section F above.

In preparation for their future employment we make extensive use of industry standard software such as Oracle, J Developer, SQL Developer, Opnet, Eclipse, Adobe, Autodesk, MS Visual Studio, Matlab, Stata, Netbeans and Unity throughout the course.

BCS the Professional Chartered Institute for IT

As an accredited BCS degree course students are eligible to join as student members thereby providing them with another route in which to monitor current industry standards and needs. They are eligible for full membership on the successful completion of their degree and they can continue within the BCS to Chartered Information Technology Professional (CITP) status, providing proof of experience in a competitive job market. It partially meets the accreditation requirements for CEng.

Curriculum, Employability and Practical Skills

Employability is signposted in the curriculum where the emphasis is on applying knowledge, developing practical skills and applying them in mini-projects representing typical workplace issues. We provide opportunities to study for industry standard certifications in Project Management such as Prince 2, AgilePM, Scrum and Kanban. The options give students a rich variety of opportunities and added value to improve their employment prospects. Aspects of employability and professional, legal, ethical issues, etc... are covered in the Agile Project Development module.

The project dissertation enables the student to showcase their ability to manage and develop their work. The course has several modules to choose from to cater to a broad range of careers ranging from software development, internet and web development, business analysis to testing. Students are recommended to discuss their choice with their course leader with a view to employability and career pathway.

Curriculum developments are discussed by the School's Industrial Advisory Panel. The School has strong links with both industry and the professional body, the BCS the Chartered Institute for IT. It hosts a local BCS chapter and several members of the School are involved with the Institute at corporate level.

Work-based learning, including sandwich courses and higher or degree apprenticeships

Work placements are actively encouraged through the postgraduate Professional Placement scheme – although it is the responsibility of individual students to source and secure such placements. This allows students to reflect upon their own personal experience of working in an applied setting, to focus on aspects of this experience that they can clearly relate to theoretical concepts and to evaluate the relationship between theory and practice.

The industrial placements team, aided by the Employability Co-ordinator, helps to prepare the students for interview and work, for example, with mock interview sessions, CV workshops, and industry speakers on employers' needs.

Industry-hosted major projects are also welcomed, but again it is the responsibility of individual students to source and secure such arrangements, thereby giving them more experience and employability skills after their Master's degree.

H. Other sources of information that you may wish to consult

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I. Development of Course Learning Outcomes in Modules

This table maps where course learning outcomes are **summatively** assessed across the modules for this course. It provides an aid to academic staff in understanding how individual modules contribute to the course aims, a means to help students monitor their own learning, personal and professional development as the course progresses and a checklist for quality assurance purposes.

Module Code		Level 7					
		CI7350	CI7240	CI7600	CI7900	CI7000	CI7320
Knowledge & Understanding	A1						
	A2						
	A3						
	A4						
	A5						
	A6						
	A7						
	A8						
	A9						
	A10						
Intellectual Skills	B1						
	B2						
	B3						
	B4						
	B5						
	B6						
	B9						
	B10						
Practical Skills	C1						
	C2						
	C3						
	C4						
	C5						
	C6						
	C7						
	C8						
	C9						
	C10						

Students will be provided with formative assessment opportunities throughout the course to practise and develop their proficiency in the range of assessment methods utilised.