Programme Specification ARO 034a

This specification provides a concise summary of the main features of the programme and of the learning outcomes that a typical student might reasonably be expected to achieve if they take full advantage of the learning opportunities provided.

This document is published on the University website and will be a publicly available record of the named programme.

The information contained in this form should be included in the Programme Handbook, either as presented below or in a format determined by the Faculty.

Section 1 Key Facts

<table>
<thead>
<tr>
<th>Awarding Body</th>
<th>University of Stirling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner Institution</td>
<td></td>
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<tr>
<td>Programme Name</td>
<td>MSc in Information Technology</td>
</tr>
<tr>
<td>Award e.g. BSc (Hons), MA etc.</td>
<td>MSc</td>
</tr>
<tr>
<td>Faculty</td>
<td>Natural Sciences</td>
</tr>
<tr>
<td>Division (if applicable)</td>
<td>Computing Science and Mathematics</td>
</tr>
<tr>
<td>UCAS Code (UG only)</td>
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<tr>
<td>Programme Code</td>
<td>TXX44-ITN</td>
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<tr>
<td>Mode of Study</td>
<td>Full Time ☒ Part Time ☐</td>
</tr>
<tr>
<td>(if both please provide two Degree Programme Tables in the Outline Programme Structure)</td>
<td></td>
</tr>
<tr>
<td>Location/Method of Study</td>
<td>On Campus – UK ☒ International ☐</td>
</tr>
<tr>
<td>Where:</td>
<td>Online ☐</td>
</tr>
<tr>
<td>Blended ☐</td>
<td></td>
</tr>
<tr>
<td>Admission Points</td>
<td>September ☒ January ☐ Other ☐</td>
</tr>
<tr>
<td>(if more than one entry point please provide a Degree Programme Table for each in the Outline Programme Structure)</td>
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<tr>
<td>Length of Programme</td>
<td>12 months</td>
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<tr>
<td>SCQF Level</td>
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<td>Total Credit Value</td>
<td>180</td>
</tr>
<tr>
<td>ECTS Credit Value</td>
<td>90</td>
</tr>
<tr>
<td>Relevant QAA Subject Benchmark</td>
<td>Masters Degree in Computing</td>
</tr>
<tr>
<td>Professional Body Accreditation (all relevant accreditations to be listed)</td>
<td>Name of accrediting body: BCS The Chartered Institute for IT (formerly British Computer Society) Required for programme: Not required, but awarded Date of Accreditation: 01 / 09 / 2016</td>
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## Section 2 Overview

### PROGRAMME SUMMARY

The MSc Information Technology is an intensive, practically-oriented course ideal for students seeking to complement their existing expertise with computing skills. You will be taught by a range of experts with specialist knowledge in software development, enterprise database systems and web technologies. The course has strong links with industry and you will have the opportunity to gain first-hand experience through project placements with local enterprises and organizations. Dissertation topics might include mobile phone app development (iPhone, Android and also cross platform environments), bespoke Java applications and advanced website development projects. The course is accredited by BCS, the Chartered Institute for IT and meets the educational requirements for Chartered Information Technology Professional (CITP) registration.

**Key Features of the Programme (including what makes it distinctive)**

Quoting from a former graduate: “Undertaking the MSc in Information Technology supported a change in the direction of my career. Entrance into a diverse IT industry was made much easier by the breadth of subjects covered within the course, all of which were relevant, informative and enjoyable. As a mature student, the course and University provided me with a friendly and relaxed learning environment. The lecturing staff were always friendly, approachable and supportive when help was needed. The small class sizes also fostered a supportive team spirit that helped me in my learning. The smaller scale of the Computing Science Division made me feel part of a close academic community in a way not possible with the larger city institutions.”

### PROGRAMME AIMS

**Overarching Programme Aims**

The MSc in Information Technology aims to produce graduates ready to enter the IT industry as productive, well-integrated members of teams developing and maintaining all sorts of computer systems, from applications running on desktop computers or mobile devices, to networks connecting computers and the servers that run distributed applications. The specific objectives of the course are to teach the principles of programming, database design, decision support systems, and Web based systems, and to give applicable practical experience in these areas.

### WHAT WILL I BE EXPECTED TO ACHIEVE?

**Detailed Learning Outcomes**

On successful completion of this programme, you should be able to:

Knowledge and Understanding:

1. Critically analyse concepts, principles and practice, in the context of loosely defined scenarios
2. Bring effective approaches to bear in solving problems, in particular in the context of programming, system design, database design, and web application design
3. Evaluate and understand requirements and specifications
4. Produce work involving problem specification, analysis, design and implementation of software systems and an understanding of the environments in which software is being developed and used
5. Prepare technical documentation and prepare and give technical presentations
6. Show effective judgement in the choice and use of tools and techniques
   (delete and add rows as needed)

Intellectual, Practical and Transferable Skills and other graduate attributes:
1. Apply appropriate practices within a professional and ethical framework
2. Organise and manage your time and prioritise workloads
3. Communicate effectively, both orally and in writing
4. Reflect on and assess your professional development
5. Work as a member of a team, recognising the different roles within a team and different ways of
   organising teams
6. Integrate experience, knowledge and practical skills, and apply them to a large loosely-specified task

HOW WILL I LEARN?
This is a highly practical course and is delivered through a combination of lectures, tutorials and
supervised practical laboratory sessions.

WHAT TYPES OF ASSESSMENT AND FEEDBACK CAN I EXPECT?
Assessment and Assessment Criteria
The programme will use the standard assessment methods of assignments, class tests and exams.
Assignments will vary from module to module, with several technical assignments, some essay writing
and some presentations. The dissertation project will be assessed by dissertation.

All assessment will be suitable for the common marking scheme and will be set to reflect both the
learning outcomes of the module and the attainment descriptors of the CMS.

Feedback on Assessment
Feedback will be provided as appropriate to the type of assignment. The emphasis will be on the skills
required to perform well in assessment (and the real world domain that the subject covers). You will
receive feedback on coursework within 3 weeks of completion of the assessment. Feedback is often
provided electronically on formal coursework.

Feedback will also be available from staff and demonstrators during supervised practical laboratory
sessions.

Feedback and Guidance sessions with teaching staff are available on all modules. These provide regular
opportunities to discuss feedback further. More information about feedback on assessment can be found
here; http://www.stir.ac.uk/academicpolicy/handbook/assessment/

Assessment Regulations
An attempt must be made at all components of assessment. There are no exceptions.

If you would like to know more about the way in which assessment works at the University of Stirling,
please see the full version of the assessment regulations at:
Postgraduate – Taught

WHAT WILL I STUDY?
Outline Programme Structure

The list below shows the modules for this programme.
12 month programme

Total credit value = 180

Compulsory Modules

<table>
<thead>
<tr>
<th>Module Title</th>
<th>Module Code</th>
<th>Credit</th>
<th>Semester</th>
<th>SCQF Level</th>
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<tbody>
<tr>
<td>Principles and Practice of Programming</td>
<td>ITNP001</td>
<td>20</td>
<td>Autumn</td>
<td>11</td>
</tr>
<tr>
<td>Foundations of Information Technology</td>
<td>ITNP023</td>
<td>20</td>
<td>Autumn</td>
<td>11</td>
</tr>
<tr>
<td>Database Principles and Applications</td>
<td>ITNP033</td>
<td>20</td>
<td>Autumn</td>
<td>11</td>
</tr>
<tr>
<td>Introduction to Networking and Webscripting</td>
<td>ITNP070</td>
<td>20</td>
<td>Spring</td>
<td>11</td>
</tr>
<tr>
<td>Object Oriented Software Design</td>
<td>ITNP090</td>
<td>20</td>
<td>Spring</td>
<td>11</td>
</tr>
<tr>
<td>Data Analytics</td>
<td>ITNPBD6</td>
<td>20</td>
<td>Spring</td>
<td>11</td>
</tr>
<tr>
<td>Dissertation project</td>
<td>ITNP099</td>
<td>60</td>
<td>Summer</td>
<td>11</td>
</tr>
</tbody>
</table>

There are no options.

READING LIST

The reading lists will be given online per module.

Section 3 Student Support [PLEASE UPDATE AS NEEDED FOR THE STUDENT COHORT]

SUPPORT FOR STUDENT LEARNING

Induction

You will receive an induction during the first days of your programme. This includes a range of social events, information sessions and activities to help you orientate yourself at Stirling and access the services available to you. These are opportunities to meet staff and other students from across the university, in the Faculty and on the programme.

There will a specific induction meeting for MSc students in computing. This will ensure that students are familiar with the organization of their programme, the principles of assessment, and access to facilities.

Study Skills Support

Student Learning Services (SLS) are committed to providing comprehensive guidance on all aspects of effective and efficient learning. The ultimate aim of the service is to enable you to make the most of your academic studies at the University and for you to become an independent, successful learner during your time at the University of Stirling. This is facilitated through collaborative work with experienced tutors and by offering a variety of courses, workshops and tutorials.

All students, whatever stage of their academic studies, are welcome to use Student Learning Services. However the service may be particularly beneficial:

- In your first two years of study.
- If you are making the transition from college to Higher Education.
- If you have been out of education for some time.

What SLS are able to do:

- Advise you on academic skills relevant to your studies at University.
• Help you consolidate your previous learning and develop new learning strategies.
• Advise on action-plans to potentially improve grades.
• Suggest practical solutions if you feel overwhelmed by assignment work.
• Help you gain confidence in the transition to Higher Education.

More information can be found here: http://www.stir.ac.uk/campus-life/learning-support/student-learning-services/

STEER
STEER is a University-wide peer support scheme linking in returning student "Captains" with new undergraduate or taught post-graduate "Crew" during their first year at Stirling.

The scheme aims to help you make the most of your time at the University, help new students - the Crew - settle in and realise the opportunities available to them. You can find out more information here: https://www.stirlingstudentsunion.com/representation/studentsupport/steer/

Academic and Pastoral Support

Adviser of Studies: Advisers have an important role to play in enhancing your academic and personal development and are essential to ensuring you make the most of your time at university. Advisers provide a personalised point of contact for you to discuss academic concerns or queries within the academic community. The general purpose of the role is to provide more in-depth advice on the academic options available to you and on the academic policies and regulations within the University. More information can be found here: http://www.stir.ac.uk/registry/advisers/

Personal Tutor: The role of a personal tutor is to help you feel part of the University community. They are a specific and consistent source of guidance, information and support for you throughout your studies. The tutor should be your first formal point of contact for general academic guidance and pastoral support. More information can be found here: http://www.stir.ac.uk/tse/personal-tutor/

Support and Wellbeing: At university you may face non-academic issues where you need some expert help or guidance. There are lots of ways we can help you in your day-to-day life at University. Student Support Services provide a range of high-quality services to assist you during the course of your studies, help prepare you for life after graduation. We aim to enhance the student experience and help you to get the most out of your time at University. More information can be found here: http://www.stir.ac.uk/tse/personal-tutor/)

Student Union: You can also access support through the Students’ Union, more information can be found here: https://www.stirlingstudentsunion.com/representation/studentsupport/

Accessibility and Inclusion (A&I): A&I are committed to offering a service which is welcoming and supportive of the needs of all students. Our service takes into account the full range of needs you may have, in a wide variety of circumstances including - physical and mobility difficulties, sensory impairments, specific learning difficulties including dyslexia and autistic spectrum disorder as well as medical conditions and mental health difficulties. A&I can also support you if you have short-term, temporary impairments or other difficulties as a result of an accident, injury, illness or surgery. More information can be found here: http://www.stir.ac.uk/student-support/accessibility-&-inclusion-service/

Learning Resources: You can find out more about the resources available to support your learning here: http://www.stir.ac.uk/campus-life/learning-support/

Section 4 Programme Evaluation and Enhancement

| METHODS FOR EVALUATING AND IMPROVING THE QUALITY AND STANDARDS OF TEACHING AND LEARNING |

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**Module Evaluation**

Module evaluations are carried out each year and are an important way of getting student feedback on the modules we teach. We aim to evaluate every module we teach in every semester. You can find out more here: [http://www.stir.ac.uk/registry/studentinformation/moduleevaluation/](http://www.stir.ac.uk/registry/studentinformation/moduleevaluation/)

**Programme Review**

Programmes are reviewed annually and on a 5 yearly cycle. You can get involved in a variety of different ways; by completing module evaluations, becoming a course representative and attending Student Staff Consultative Committees, or participating in the review process itself. You can find out more here: [http://www.stir.ac.uk/academicpolicy/handbook/review-and-monitoring/](http://www.stir.ac.uk/academicpolicy/handbook/review-and-monitoring/)

**External Examiner(s) (To be added following Stage 2 approval)**

Name of External Examiner: Dr Dharini Balasubramaniam

Institution: University of St Andrews

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**Section 5 My Future**

**WHAT KIND OF CAREER MIGHT I GO ON TO?**

The MSc in Information Technology opens up careers in a range of sectors including health, IT software organizations, service enterprises, engineering and construction firms as well as in the retail sector. Previous students have been very successful in employment in the Information Technology field in organizations such as IBM, Hewlett Packard, Lloyds TSB, Scottish Equitable, the National Health Service and local government. Typical job profiles include Software Developer, IT Consultant, Application Developer, Systems Analyst, and Web Developer.

**WHAT STUDY ABROAD OPPORTUNITIES ARE AVAILABLE?**

There are no study abroad opportunities.

**WHAT PLACEMENT OPPORTUNITIES ARE AVAILABLE?**

The three month summer dissertation project may be carried out as a placement with a company. The Division of Computing Science and Mathematics has had a good level of success placing students in companies for their projects, and we expect this to continue.

**WHAT FURTHER STUDY OPTIONS ARE AVAILABLE TO ME?**

The student could go on to a more specialized MSc programme (such as Big Data or FinTech), or a research degree (such as the Professional Doctorate in Big Data Science or a PhD in Computing Science).

**WHAT OTHER INFORMATION DO I NEED TO KNOW?**

Contact the programme director if you have any questions. They will also be able to direct you to specific preparatory reading for the course, based on your previous experience.

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**Section 6 Admissions**

**HOW DO I ENTER THE PROGRAMME?**

**Admissions Criteria**

A minimum of a second class Honours degree or equivalent in a non-computing subject is required. Applicants without these formal qualifications but with significant appropriate work experience are encouraged to apply.