**Program Specification**

**PROGRAM TITLE:** Integrated Foundation Year (Level A) for BSc (Hons) Computer Science and BEng (Hons) Electronics and Computer Systems

PLEASE NOTE. This specification provides a concise summary of the main features of the Programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he or she takes full advantage of the learning opportunities provided.

| 1 | Awarding Institution/Body | University of Ulster |
| 2 | Teaching Institution | University of Ulster |
| 3 | Location | Magee Campus and associated Further and Higher Education Institutes |
| 4 | Programme accredited by | None |
| 5 | Final Award* | Diploma in Computer Systems |
| 6 | Mode of Attendance | Full - Time |
|  |  | Part-time at associated Further and Higher Education Institutes |
| 7 | Specialisms | Computing/Electronics |
| 8 | UCAS Code | G409 M BSc/CmpSC5 or GHM6 M BEng/ECom5 |
| 9 | QAA Subject Unit | Computing/Electronics |

* for students who do not progress to an award at a higher attainment level.

10 **Educational Aims of the Program**

The main aim of this entry level course is to widen access to honours degree level courses in computing and electronics at the Magee Campus. The course therefore aims to provide introductory knowledge in computing systems and electronics, and thus prepare students to proceed onto the normal (level 1) programme of study for honours degree courses. Additionally, it also aims to equip those students who decide to finish their studies at Diploma level, with fundamental knowledge and skills that enable them to pursue a productive professional career in the computing or electronics industries.
11 MAIN LEARNING OUTCOMES

The course provides opportunities for students to achieve and demonstrate the following learning outcomes.

11 A KNOWLEDGE AND UNDERSTANDING

This course provides opportunities for students to achieve and demonstrate the following learning outcomes:

A1 Demonstrate knowledge and understanding of basic facts, concepts, principles, and practices underlying computer and electronics systems;

A2 Use such knowledge and understanding in the design and development of electronics and software solutions for the purposes of comprehension, and the understanding of trade-offs;

A3 Evaluate the extent to which an existing solution meets a defined need and understand how an electronics or software solution could be applied to enhance it;

Learning and Teaching Methods that will enable the outcomes to be achieved:
Lectures, Tutorials, Seminars and Practical sessions

Assessment Methods that enable the outcomes to be demonstrated:
Course work, written unseen examinations, technical presentations.

11 B INTELLECTUAL QUALITIES

B1 The ability to specify, design and construct simple electronics and software solutions;

B2 The ability to evaluate such systems with respect to general quality and possible trade-offs within the parameters of the problem;

B3 The ability to recognise the implications or risks involved in the operation of computing equipment within an ergonomic context;

B4 The ability to generate and evaluate the results of tests which investigate the effective operation of an electronics and software solution.

Learning and Teaching Methods that will enable the outcomes to be achieved:
Lectures, tutor directed tutorials, student led seminars, supervised practical sessions and self-directed learning employing study packs and research based materials.

Assessment Methods that enable the outcomes to be demonstrated:
Course work related to case studies and mini-projects, written unseen examinations, presentations.
11 C PRACTICAL SKILLS

C1 The ability to select and apply simple design methodologies to a given problem domain;
C2 The ability to employ effectively the tools used for the construction and documentation of electronics and software solutions;
C3 The ability to prepare and deliver presentations and written reports.

Learning and Teaching Methods that will enable the outcomes to be achieved:
Lectures, Tutorials, problem based seminars and practical sessions, and mini-projects.

Assessment Methods that enable the outcomes to be demonstrated:
Problem based course work, workbooks, and reports.

11 D TRANSFERABLE / KEY SKILLS

D1 The ability to learn in both familiar and unfamiliar situations making effective use of information-retrieval skills and of learning resources;
D2 The ability to communicate effectively using various media and with a variety of audience, using rational and reasoned arguments either orally, written or electronically;
D3 Numeracy in both understanding and presenting cases involving a quantitative aspect;
D4 Managing one’s own learning and development including time management and organisational skills;
D5 Appreciate the need for continuing professional development in recognition of the requirement for Life Long Learning.

Learning and Teaching Methods that will enable the outcomes to be achieved:
Lectures, Tutorials, Seminars and practical sessions, and mini-projects.

Assessment Methods that enable the outcomes to be demonstrated:
Workbooks, presentations and reports.
12 PROGRAM STRUCTURE AND REQUIREMENTS FOR THE AWARD.

This program can be studied either full-time over a period of one year or part-time over a maximum period of three years. The full-time course is arranged in two semesters per year - each of which is 15 weeks duration. The learning is divided into study units called modules. All modules have a credit value of 20 credits. The credit weighting of a module is in proportion to the effort required from the student, thus a 20 point module corresponds to 200 hours of attending lectures, tutorials, seminars, practical classes, course work, assignment work, examinations and self-study. The modules are arranged into two levels of study accounting for 120 credit points. The study units within the course, the levels at which they are studied, the credit ratings and awards that may be gained are shown below.

<table>
<thead>
<tr>
<th>Module Title</th>
<th>Credit Level</th>
<th>Credit Points</th>
<th>Core or Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Information Systems</td>
<td>1</td>
<td>20</td>
<td>C</td>
</tr>
<tr>
<td>Introduction to Mathematics for Computing</td>
<td>A</td>
<td>20</td>
<td>C</td>
</tr>
<tr>
<td>Introduction to Computer Systems</td>
<td>A</td>
<td>20</td>
<td>C</td>
</tr>
<tr>
<td>Introduction to Electronics</td>
<td>A</td>
<td>20</td>
<td>C</td>
</tr>
<tr>
<td>Introduction to Programming</td>
<td>A</td>
<td>20</td>
<td>C</td>
</tr>
<tr>
<td>Introduction to Internet and Multimedia Technology</td>
<td>A</td>
<td>20</td>
<td>C</td>
</tr>
</tbody>
</table>

Potential award: Diploma (120 credit points)
13. SUPPORT FOR STUDENTS AND THEIR LEARNING

Support for students and their learning:

• An Induction Programme for new students (all years) is held throughout the first 6 weeks of Semester One. This Programme includes talks by the Course Director covering 'What is expected of you' and tours of the library given by library staff.
• The Course Director is available at specified hours for advice
• A Course web site provides an electronic version of the student handbook (including this document), an electronic noticeboard with daily notices and links to other on-line resources (Academic Affairs, Careers, Library, timetables etc)
• Every student receives a hard copy of the Student handbook (incorporating this document)
• Students are supported by Extensive library and other learning resources
• The School of Computing and Intelligent Systems is resourced by a number of state-of-the-art computer laboratories with a wide range of software. New software is introduced as required per semester.
• All modules have an associated Website with on-line learning support material (module specification, lecture notes, useful web links etc)
• Every student is allocated an email account and has full (24 hours, 7 days a week) access to the computing laboratories and the Internet
• Each student is allocated a personal Studies Advisor who is available for academic and academic-related advice
• Placements unit dedicated to preparing students for placements and finding placement opportunities for students
• Academic staff visit students on placement
• Advertised availability hours for academic staff
• Course noticeboard

14. CRITERIA FOR ADMISSION TO THE COURSE

Entry: Satisfy all University and School of Computing and Intelligent Systems admissions criteria as specified for the programme at the time of entry.
15. EVALUATING AND IMPROVING THE QUALITY AND STANDARD OF LEARNING AND TEACHING

Mechanisms for review and evaluation of teaching, learning, assessment, the curriculum and outcome standards:
- Module reviews (student questionnaires and teaching team report)
- Annual staff reviews
- Regular Course Committee reviews
- Course accreditation by external bodies
- Annual Programme Commentary prepared by the Course Director
- Peer teaching observations and feedback

Committees with responsibility for monitoring and evaluating quality:
- Staff Student Consultative Committee
- Course Committee
- Board of Examiners
- School Board (includes student members)
- Faculty Teaching and Learning Committee (includes student members)
- University Teaching and Learning Committee

Mechanisms for gaining student feedback on the quality of their learning experience
- Staff-Student Consultative Committee
- Student representatives on School and Faculty boards
- Module evaluation questionnaires / module forum / module freeform responses
- Placement reports

Staff development includes:
- Updating in the subject through research and scholarship
- Membership of professional bodies
- Consultancy
- Research and Knowledge Transfer
- Representation on external working groups and committees

16. REGULATION OF STANDARDS

Assessment rules
Refer to the Regulations for Undergraduate Courses.

External examiners
The course has one External Examiner. His/Her role is to consult, through the Course Director, with the internal examiners on the approval and moderation of examination papers and other forms of assessment. The External Examiner approves the examination papers, and reviews all the assessment marking and results. In addition, the External Examiner ensures comparability with similar courses at other institutions as regards course content and the standard of marking of examination papers and other forms of assessment. The External Examiner provides valuable feedback to the Course Committee by submitting annual reports outlining any strengths or weaknesses of the course and the assessment procedures. The External Examiner may assist the Course Committee in reaching decisions on borderline candidates, and may subject such candidates to viva-voce examination.