



PROGRAMME SPECIFICATION FOR TAUGHT PROGRAMMES AT ALL LEVELS

Name of Programme:		BSc Computing with Business and Management (with integrated Foundation)	
Final award (BSc, MA etc):		BSc	
Awarding institution/body:	University of Buckingham	Teaching institution:	University of Buckingham
School of Study:	Foundation and Academic Skills / School of Computing / School of Business	Parent Department: (the department responsible for the administration of the programme)	Foundation and Academic Studies / School of Computing
Length of the programme: (please note any periods spent away from Buckingham, e.g placements)	3 years or 3¼ years	Method of study: Full-time/Part-time/Other	Full-time
Framework for Higher Education Qualifications (FHEQ) Level (see Guidance notes, section D – External Reference Points)	FHEQ Level 6	Relevant subject benchmark statement (SBS) (see Guidance notes, section D – External Reference Points)	QAA SBS: Computing (2016)
Professional body accreditation (if applicable):	British Computer Society		
Criteria for admission to the programme:	Satisfactory completion of 12 years of schooling plus GCSE English and Maths at Grade C/4; minimum IELTS score of 6.0	Cohort(s) to which this programme specification is applicable:	September 2018 – Computing with B&M
UCAS Codes	Computing with Business and Management (with integrated Foundation) (I1N1)		

Summary of Programme

The three year BSc in Computing major with minor option is designed for students who need additional preparation prior to undergraduate level study. The first year of the programme is intended to provide a foundation in both knowledge and academic skills for the more specialist subjects in years two and three.

Computing and communications technologies lie at the heart of modern society. They include hardware, software, networks, tools, telecommunications equipment and required standards that provide the technological framework on which the delivery of information services is based. With the advanced hardware and software technologies being used in different domains of application, there is a demand for graduates with sound technical computing and IT understanding and a fundamental awareness and understanding of one of the application domains. This programme is intended to produce graduates who have the right knowledge and skills to meet that demand.

This intensive programme is delivered in two possible modes: the normal 3-year mode starting in January or the 3¼ year mode starting in September. The intensive nature of the programme requires motivation, commitment and above all good management of time from students.

The content of this fast-track programme is compatible with the UK QAA subject benchmark statement for Computing and with the Framework for Higher Education Qualifications in England, Wales and Northern Ireland on levels and standards. The intensive nature of the programme requires motivation, commitment and above all good management of time.

Educational Aims of the Programme

During the first year core modules are studied which will train students to become independent learners equipped to continue their studies in years two and three. The programme aims to develop in students the ability to construct and communicate logical arguments clearly; to help students acquire and practice strategies for effective reading and for academic vocabulary development; to provide opportunities for students to develop IT skills; to train students in language awareness; to encourage students to develop general study skills, particularly including the ability to learn independently using a variety of source materials; to stimulate engagement and participation in the learning process; to encourage students to become autonomous learners. Students will have the opportunity to develop knowledge of academic subjects related to their future study.

The overall aim of this programme is to enable students to develop their potential so that they can apply what they have learnt to deal with computational problems and develop solutions in a real-world environment in relation to their minor option field. In particular, this major/minor programme of study specifically aims to produce technically sound computing graduates who are exposed to basic concepts, principles and practice of a given minor option area, equipping them with not only the technical know-how but also a fundamental understanding of the application area. Through studying this programme, students learn how to specify, design, develop and operate efficient and innovative computer-based systems and gain up-to-date knowledge and awareness of the relevant computing technologies relevant to the minor option area within a shorter space of time. Graduates of the degree programme will be able to undertake a variety of careers in the IT sector or field of related industries.

Programme Outcomes

<u>Knowledge and understanding of:</u>	→	<u>Teaching/Learning Strategy:</u>
<p>At the end of the programme students should be able to gain knowledge and understanding in:</p> <ol style="list-style-type: none"> 1. Use English effectively for academic study 2. Demonstrate the use of sources of information 3. Demonstrate a knowledge of the structures, functions, processes and cultures pertaining to a range of social organisations, 4. Demonstrate a knowledge of the external environment within which organizations operate, including the political, social, economic and technological contexts at both national and international levels 5. Obtain a basic foundation of the knowledge required to undertake study at a higher level in their chosen academic specialisation 6. Understand the roles that computer systems play in the modern world. 7. Understand the history of computing and evolution of computer technologies 8. Possess knowledge in mathematics that is crucial for the study of a computing programme 9. Understand basic concepts of world wide web and skills in designing useful documents on the web. 10. Gain awareness of and familiarity with university study environment <p>On successful completion of years 2 and 3 students should have knowledge and understanding of:</p> <ol style="list-style-type: none"> 11. Roles of computer-based systems in modern societies 12. Fundamental facts, concepts, theories, principles & methodologies. Concepts and principles of the chosen minor field 13. Computer programming, together with relevant mathematical structures and 		<p>Year 1: Modules will be delivered with a combination of lectures, seminars and small group tutorials, and with practical classes as appropriate. Teaching is supported by the use of module texts, and journal articles. The use of IT is embedded across the curriculum Understanding is reinforced by support from tutors in the form of comments based on their assignment answers. (ILO:1-10)</p> <p>Years 2 and 3: (ILO:11-17) Classroom-based teaching/learning following the principle of progressive disclosure is the main strategy for achieving all aspects of the knowledge and understanding. A variety of sessions of teacher-student interaction such as lectures, tutorials, practical classes, workshops, seminars, and project supervision sessions are deployed to enhance the understanding. Reading, practicing and interactions with teachers and peers are useful strategies of learning. Virtual learning environments, online or stand-alone software tools are used to enhance the effects of teaching and learning. The Individual project is used as an opportunity for self-directed learning.</p> <p>Teaching/learning strategies corresponding to the specific aspects of knowledge and understanding are as follows:</p> <ol style="list-style-type: none"> 1. Examples systems, case studies, individual project, site visits; 2. Lectures, tutorials, seminars; 3. Practical classes, coursework and individual project; 4. Module projects, individual project, group work (including role play), workshops; 5. Lectures, tutorials, individual project, literature review style coursework; 6. Strategies of specific modules; 7. Skill module on PESLI, individual project, coursework for certain modules.

<p>concepts</p> <p>14. Use of the theoretical knowledge, methods & tools in modelling, designing, implementing and deploying usable computer-based systems and related management issues</p> <p>15. System architectures and related technologies</p> <p>16. State-of-art development of technologies and their applications in interactive multimedia, information security, business and intelligent decision-making systems. Applications of IT in the minor field</p> <p>17. Ethical, professional, social and legal issues in exploiting computing technology in practice.</p>	<p>→</p>	<p><u>Assessment Strategy:</u></p> <p>Year 1: (1-5) Students' knowledge and understanding will be formally assessed by completing individual tutor marked assignments, presentations, individual projects and a group project. Each module will also be assessed by unseen written examinations.</p> <p>Years 2 and 3: (6-10) Student knowledge and understanding are evaluated by a combination of the following means:</p> <ul style="list-style-type: none"> ▪ Written exams and tests (1, 2, 3, 4, 5, 6, 7) ▪ Coursework (1, 2, 3, 4, 5, 6, 7) ▪ Practical exams & practical tests (3) ▪ Project reports and presentations (1, 2, 4, 5, 6, 7) ▪ Individual Project work (1, 2, 3, 4, 5, 6, 7) <p>According to the marks awarded, students are then considered as being</p> <ul style="list-style-type: none"> ▪ failed to achieve the knowledge and understanding, ▪ partially achieving the knowledge and understanding or ▪ fully achieving the knowledge and understanding
<p><u>Cognitive (thinking) skills:</u></p> <p>At the end of the programme, students should be able to gain skills and abilities in:</p> <p>Year 1:</p> <ol style="list-style-type: none"> 1. Analyse problems, sifting the irrelevant from the relevant, and expressing the results in both written and oral forms 2. Evaluate proposed solutions using appropriate methods 3. Integrate knowledge and skills from various sources into a coherent whole, making appropriate abstractions 4. Synthesise arguments from underlying premises to produce overall conclusions 5. Demonstrate a heightened awareness of differences in culture, historical context, values and political structures 6. Present acquired knowledge from various sources. 7. Conduct logical reasoning, logical thinking and drawing sensible conclusions. 8. Build an evidence based argument and improve the quality of argument. <p>Years 2 and 3:</p> <ol style="list-style-type: none"> 9. Gathering, evaluating, filtering and selecting useful information on new technologies from primary sources 	<p>→</p>	<p><u>Teaching/Learning Strategy:</u></p> <p>Year 1: The principles are discussed in the module texts, lectures and seminars, with many examples given to aid understanding of the processes involved. The students are also provided with practical activities to develop cognitive skills, utilising case study materials and computer software. Tutor Marked Assignments are carefully designed, pieces of work which require the skills of analysis, evaluation and integration. The Individual Academic Essay and the Project are extended opportunities for students to further develop and be assessed on these skills (CS:1-8)</p> <p>Years 2 and 3: (CS:9-13) The skills are achieved through various forms of practical exercises. In particular,</p> <ul style="list-style-type: none"> ▪ After-lecture revisions (1, 3, 5) ▪ Exercises in tutorials, practical classes and coursework (all) ▪ Research type module projects, Journals and articles (1, 3, 5) ▪ Individual Project (all) <p>The skills are obtained through successes and failures in the practical exercises. Feedbacks from tutors assist obtaining and improving the skills.</p>

<p>10. Identifying problems and specifying requirements for new solutions</p> <p>11. Evaluating solutions (technical and non-technical). Deploy appropriate methods and tools. Principles behind business thinking and decision making concerning the minor field</p> <p>12. Modelling & designing computer-based software systems</p> <p>13. Communicating knowledge to technical & non-technical audience</p>	<p>→</p>	<p><u>Assessment Strategy:</u></p> <p>All skills are assessed by the following means:</p> <ul style="list-style-type: none"> ▪ Coursework ▪ Practical examinations ▪ Project reports ▪ Individual Project <p>According to the assessment results, students are considered as being</p> <ul style="list-style-type: none"> ▪ failed to possess the skills, ▪ partially possess the skills ▪ competently skilled
<p><u>Practical/Transferable skills (able to):</u></p> <p>Practical computing skills: At the end of the programme students should be able to:</p> <ol style="list-style-type: none"> 1. Work as a part of development team and recognise the roles to play within the team 2. Produce individual work and undertake self-directed learning of new knowledge for education and professional development 3. Effectively gathering, filtering and critical evaluating information 4. Effectively presenting information in written and oral forms, and communicate successfully with a variety of audiences 5. Analyse data and present the analysis results 6. Time management 7. Use appropriate theoretical and practical processes to specify, design, construct or implement, evaluate and maintain computer systems 8. Apply principles, methods and tools of system design in developing information systems that meet user needs 9. Evaluate alternatives, understand trade-off issues and deploy effective tools and methods in solving problems, working with technical uncertainty 10. Operate computer systems effectively and familiar with well-established languages, software systems and tools <p>Transferable skills: At the end of the programme students should be able to:</p> <ol style="list-style-type: none"> 11. Produce individual work and undertake self-directed learning of new knowledge for education and professional development 12. Work as an effective part of development team and recognise the roles to play within the team 13. Analyse data and present the analysis results to a variety of audience of different backgrounds 14. Problem solving and time management 	<p>→</p> <p>→</p>	<p><u>Teaching/Learning Strategy:</u></p> <p>The skills are obtained through practical exercises. In particular,</p> <ul style="list-style-type: none"> • Module projects (all) • Individual project (all) • Individual coursework (1,2,3,5,7,8) • Group coursework (all) • Extensive practical exercises in workshops and practical classes (4, 8) • Presentations/Demonstrations (7) <p><u>Assessment Strategy:</u></p> <p>All skills are assessed by means of the following:</p> <ul style="list-style-type: none"> ▪ Coursework (written essays and reports) ▪ Practical/written examinations ▪ Presentation/Demonstration performance ▪ Group work reports ▪ Individual Project <p>Individual project plays a critical role in obtaining the key skills. The importance of the individual project is reflected by a special examination convention for the programme, which states that the overall degree classification cannot be significantly higher (i.e. one grade higher) than that awarded to the project.</p>

External Reference Points

The following reference points were used in designing the programme

- QAA Framework for Higher Education Qualifications:
(<http://www.qaa.ac.uk/en/Publications/Documents/Subject-benchmark-statement-Computing.aspx.pdf>)
- Relevant Subject Benchmark Statement(s): QAA Subject Benchmark Statement Computing:
(<http://www.qaa.ac.uk/en/Publications/Documents/Subject-benchmark-statement-Computing.aspx.pdf>)
- BCS Guidelines on Course Accreditation:
(http://www.bcs.org/upload/pdf/hea-guidelinesfull-2012_1.pdf)

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/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each course unit/module can be found in the departmental or programme handbook. The accuracy of the information contained in this document is reviewed annually by the University of Buckingham and may be checked by the Quality Assurance Agency.

Programme Director(s) Name(s):	Dr Athar Ali
Date approved by School Learning and Teaching Committee	October 2018
Date approved by School Board of Study	October 2018
Date approved by University Learning and Teaching Committee	November 2018

PROGRAMME STRUCTURE

COMPUTING WITH BUSINESS AND MANAGEMENT [BSc]

September Entry – 13 terms

First year foundation modules are 10 units except where specified

All modules are 15 units, except where specified as 30 units or 45 units

Term	YEAR ONE			
1 Autumn	Key Academic Skills	Critical Thinking	Essential Computing Skills	Life and Institutions
	MARCH EXAMINATION			
2 Winter	Academic Writing Skills	International Studies	Essential Mathematics	Fundamentals of Computing (part 1)
	JUNE EXAMINATION			
3 Spring	Advanced Academic Studies	Research Skills	Foundation Mathematics	Fundamentals of Computing (part 2)
	SEPTEMBER EXAMINATION			
4 Summer	Mathematical Methods [3] (20 units)	Evolution of Computing [3] (20 units)	Introduction to Web Computing [3] (20 units)	
	DECEMBER EXAMINATION			
	COMBINED PROGRAMMES			
	MAJOR		MINOR	
Term	YEAR ONE			
5 Autumn	Introduction to Computer Systems [4]		Understanding Business & Management with embedded academic skills (30 units) [4]	
	THE PRELIMINARY EXAMINATION			
6 Winter	Problem Solving and Programming 1 [4]		Information Based Decision Making [4]	
	*Study Skills for Science			
7 Spring	Introduction to Operating Systems [4]	Problem Solving and Programming 2 [5]	Marketing Fundamentals [4]	
	THE PRELIMINARY EXAMINATION			
8 Summer	Principles of Database Systems [5]	Object-Oriented Programming [5]	Behaviour in Organisations [5]	
9 Autumn	Software Engineering [6]	Principles of Computer Networks [5]	Process & Operations Management [5]	
	THE PART 1 EXAMINATION			
	YEAR TWO			

10 Winter	Information Security [6]	Project [6] (45 units)	Creativity, Innovation & Entrepreneurship [5]
	*Professional, Ethical, Social and Legal Issues		
11 Spring	Software Project Management [6]	Project [6] (45 units)	Corporate Strategy & Strategic Management [6]
	THE PART 2 STAGE 1 EXAMINATION		
12 Summer	Multimedia Systems [5]	Project [6] (45 units)	Business Simulation [6]
13 Autumn	Cloud Computing [6]	Technologies for Business Intelligence [6]	Cross-cultural Management [5]
	THE PART 2 STAGE 2 EXAMINATION		

This programme is the fast-track 3 ¼ year programme.

This programme is the only entry point for Computing Major combined degree programme.

Study Skills for Science and Professional, Ethical and Legal Issues are two skills modules that do not count any units of credit. Students must pass both modules. Students will not be awarded a degree until they pass both modules