Course Specification

Course Summary Information		
1	**Course Title**	BSc (Hons) Computing and Information Technology with Foundation Year
2	**Course Code**	US0821F
3	**Awarding Institution**	Birmingham City University
4	**Teaching Institution(s)** (if different from point 3)	
5	**Professional Statutory or Regulatory Body (PSRB) accreditation** (if applicable)	

6	**Course Description**
	The multidisciplinary BSc (Hons) Computing and Information Technology degree will equip you with the technical and managerial skills you will need to embark on a successful IT career. You will use, industry-standard equipment and labs, and have the chance to put your academic learning into practice during an optional placement year, all of which will prepare you for a computing career with a range of companies. We are also an academy with leading industry names such as Microsoft, Cisco and the Linux Professional Institute, providing access to additional industry certifications during your course. Your curriculum is supported by a range of leading industry partners to ensure it continues to be relevant and employment focused. Throughout your computing degree, you will be supported by expert teaching staff, many of whom have worked in the field of computing, are active in transformational research and are continually innovating with industry partners to achieve success. **What's covered in the course?** This course is for you if you want to combine a highly rigorous academic qualification with real-life practical work experiences, enabling you to put your learning into innovative practice. You will be based at our City Centre Campus, where you will use dedicated, industry-standard facilities to research and work on enterprise software and virtual environments to develop enterprise solutions and real-time systems. You will develop the strategic mindset to address global challenges; the kind that businesses and communities face on a day-to-day basis to maintain their digital infrastructure. You will have access to virtual learning environments, as well as networking, electronics, enterprise systems, cloud computing and business intelligence laboratories. To prepare you for industry, you will learn about computing and develop skills that are needed to design, develop, operate and manage effective systems. Your knowledge of the application of computing to provide IT solutions will evolve, allowing you to develop sustainable business solutions.

	Studying computing with us puts you at the heart of an exciting, innovative community. Part of your first-year assessment will involve taking part in our annual InnovationFEST, where students get together to solve society's problems with sustainable solutions using creative technology. It's not just about academic and technical knowledge – we will also help you to develop your personal and professional skills so that you can work effectively as a team member and team leader to positively impact many of the challenges facing modern society. **Foundation Year Computing** The Foundation Year course option enables you to study for our BSc (Hons) degree over an extended full-time duration of four years by including a Foundation Certificate (year one of four). The Foundation Certificate provides a broad study course that underpins the follow-on degree. To progress to the next year of your degree, it is necessary to achieve a pass in all of the modules of the Foundation Certificate. **Professional Placement Year** This optional year-long industrial placement will enhance your employability and will also make you stand out from the crowd. While these positions may vary from company to company, you will be working alongside current professionals as you apply skills you have learned on campus in the real world. Not only will you return to your studies with a greater array of technical skills, but also improved confidence and noticeably sharper transferable skills.

7	**Course Awards**		
7a	**Name of Final Award**	**Level**	**Credits Awarded**
	For BSc (Hons):		
	Bachelor of Science with Honours Computing and Information Technology	6	360
	Bachelor of Science with Honours Computing and Information Technology with Professional Placement Year	6	480
7b	**Exit Awards and Credits Awarded**		
	Foundation Certificate Computing	3	120
	Certificate of Higher Education Computing and Information Technology	4	120
	Diploma of Higher Education Computing and Information Technology	5	240
	Bachelor of Science Computing and Information Technology	6	300

8	**Derogation from the University Regulations**
	N/A

9	Delivery Patterns

Mode(s) of Study	Location(s) of Study	Duration of Study	Code(s)
Full Time	City Centre	3 years	US0821
Full Time with Foundation Year	City Centre	4 years	US0821F
Full Time with Foundation Year	UAE Campus	4 years	US1438F

10	Entry Requirements
	The admission requirements for this course are stated on the course page of the BCU website at https://www.bcu.ac.uk/ or may be found by searching for the course entry profile located on the UCAS website.

11	Course Aims
	The BSc (Hons) Computing and Information Technology (CIT) course endeavours to develop you into versatile and resilient graduates equipped to apply a range of technologies required in today's rapidly evolving computing industry. The course combines research and theory with practical application and development, enabling you to put your learning into innovative practice. You will develop a strategic mindset of addressing global, business and societal needs. You will learn computing and information technology skills that are needed to design, develop, operate and maintain systems, whilst ensuring you can innovate to deliver business value and sustainable solutions. We recognise the significance of employability; therefore, our programme encourages and enables collaborative activity, engagement with work placements, projects, international exchanges and engagement with emerging technologies. Future graduates will need to be versatile, adaptable, technically literate, and well equipped to perform a variety of roles within the computing industry. Potential areas of application include IT support, network and systems management, IT management, infrastructure cloud facilities and systems development. The course also provides a foundation for further study at postgraduate or PhD level for a career in a research, innovation and enterprise roles in the industry. The course utilises both proprietary and open-source technologies that are being deployed in the data centre space and are a critical component of cloud computing. Leading industry vendor technologies are embedded into modules, from major names such as Microsoft, Cisco, Google, Canonical (Ubuntu Linux), and AWS. The CIT course delivers a well-defined blend of computing and transferable skills and develops the following major themes in-depth: • Software solution development – developing skills as a problem solver to build systems that meet the needs of industry using code and low code/no-code solutions.

	• Cloud, infrastructure and DevOps – designing, building and troubleshooting the systems that deliver software and services to customers worldwide using the latest tools, practices and technologies. • Business and entrepreneurship skills – the skills needed to understand the role of computing in an organisation and to innovate and progress the business using technology. These themes will be supported by additional concepts: • Computer networking – learn how to make systems talk to each other and the skills to design and develop the networks of tomorrow. • Digital transformation - learn how through the synergy of people and technology, businesses can grow and thrive. **Professional Placement Year** Every student has the option of a professional placement year, taken in their third year of study or fourth year of foundation route, making the course four years in total or five years on the foundation year route. This gives them the opportunity to gain important industry experience in preparation for their final year and significantly increases their chances of direct employment after they graduate.

12	**Course Learning Outcomes**
Knowledge & Understanding	
1	K1 Draw on a range of existing and emergent technologies and approaches in the development and justification of innovative computing and information technology solutions.
2	K2 Explore theory and practice modern computing systems and their applications in business.
3	K3 Evaluate management, planning and business techniques and their application in the Computing industry.
4	K4 Select and apply appropriate computational, mathematical, and analytical techniques to solve complex problems, recognising the limitations of the techniques employed.
5	K5 Apply an integrated or systems approach to the solution of complex problems
6	K6 Explore different viewpoints and perspectives on commercial, economic, legal, ethical, and social issues relevant to the computing industry.
7	K7 Evaluate the environmental and societal impact of solutions to complex problems and minimise adverse impacts.
Skills and other attributes	
8	S1 Critically apply tools and techniques for the design, implementation, testing, troubleshooting and maintenance of computer software and hardware solutions.
9	S2 Demonstrate competence in management of research and projects, taking account of industrial and commercial constraints.
10	S3 Manage workload and professional development utilising techniques such as reflection, prioritisation, team-working and time management.
11	S4 Communicate effectively in a variety of media to specialist and non-specialist audiences.
12	S5 Adopt an inclusive approach to technology practice and recognise the responsibilities, benefits and importance of supporting equality, diversity and inclusion.

13	**Course Learning, Teaching and Assessment Strategy**
	The course adopts a student-centric approach. The learning and teaching style aims to build students' confidence and empowers them to become self-learners while being considerate and receptive to their learning styles. Each module utilises a wide range of learning and teaching practices and approaches, which include: • Mini lectures • Workshops • Practical sessions • Debates/discussions • Flipped learning • Self-directed study • Directed reading • Project-based learning The primary teaching approach is through workshops and practical labs. These will be supplemented with mini lecturers to re-enforce the learning with theoretical concepts. Typically, the workshop will start with a briefing about the problem to be solved. Students will then work individually or in teams to solve the challenges. Students will also engage in a range of practical tasks in labs. Students will be encouraged to lead the plenary talks to build confidence and engage in discussions about contributions and ideas. The self-directed study will be supported by activities such as: • VLE learning, academic resources and website links • Online (VLE) discussion forums • Videos • Quizzes, labs, projects etc. **Assessment:** Formative and summative assessments are used within all modules. Formative feedback will also help students understand the assessment and grading process, the relation of their work to the learning outcomes and the development of their work to a successful conclusion. Assessment methods have been designed to work symbiotically with the course design. For example, an agile assessment approach is adopted to simulate a work environment requiring multiple deliverables within a specific timeframe. Hence, the course integrates multiple modules as part of the agile assessment approach, highlighting how the expertise and skills from the different modules can be applied to address organisational challenges.

14	Course Requirements

14a **Level 3:**

To complete this course, you must successfully complete all the following CORE modules (totalling 120 credits):

Module Code	Module Name	Credit Value
CMP3010	Fundamental Mathematics	20
CMP3014	Fundamentals of Digital Technology	20
CMP3012	Web Application Design	20
CMP3013	Audio / Video Fundamentals	20
BNV3002	Independent Practice	20
CMP3009	Foundations of Programming	20

Level 4:

To complete this course, you must successfully complete all the following CORE modules (totalling 120 credits):

Module Code	Module Name	Credit Value
CMP4265	Applied Operating Systems	20
CMP4267	Computer Systems	20
CMP4269	Network Fundamentals	20
CMP4285	Innovation Project	20
CMP4295	Computational Thinking and Professional Development	20
CMP4296	Introduction to Programming	20

Level 5:

To complete this course, you must successfully complete all the following CORE modules (totalling 120 credits):

Module Code	Module Name	Credit Value
CMP5320	Networking Technologies	20
CMP5322	Enterprise Practice Project	20
CMP5323	Human Computer Interaction	20
CMP5350	Server Systems	20
CMP5364	Database Systems Development	20
CMP5368	Applied Programming	20

Professional Placement Year (optional) In order to qualify for the award of Bachelor of Science with Honours Computing and Information Technology with Professional Placement Year, you must successfully complete all the modules listed as well as the following Level 5 module:

Module Code	Module Name	Credit Value
PPY5004	Professional Placement	120

Level 6:

To complete this course, you must successfully complete all the following CORE modules (totalling 120 credits):

Module Code	Module Name	Credit Value
CMP6172	Consultancy & IT Management	20
CMP6173	Business Systems Solutions	20
CMP6235	Application Solutions Development	20
CMP6237	DevOps and Enterprise Automation	20
CMP6200	Individual Honours Project	40

14b	Structure Diagram

Level 3

SEMESTER ONE	SEMESTER TWO
Fundamental Mathematics (20 Credits) Fundamentals of Digital Technology (20 Credits) Web Application Design (20 Credits)	Audio / Video Fundamentals (20 Credits) Independent Practice (20 Credits) Foundations of Programming (20 Credits)

Level 4

CMP4267 Computer Systems (20 credits) CMP4295 Computational Thinking and Professional Development (20 credits) CMP4296 Introduction to Programming (20 credits)	CMP4265 Applied Operating Systems (20 credits) CMP4269 Network Fundamentals (20 credits) CMP4285 Innovation Project (20 credits)

Level 5

CMP5364 Database Systems Development (20 credits) CMP5350 Server Systems (20 credits) CMP5320 Networking Technologies (20 credits)	CMP5322 Enterprise Practice Project (20 credits) CMP5323 Human Computer Interaction (20 credits) CMP5368 Applied Programming (20 credits)

PPY5004 Professional Placement - Year 3 (optional) (120 credits)

Level 6

CMP6173 Business Systems Solutions (20 credits) CMP6237 DevOps and Enterprise Automation (20 credits)	CMP6172 Consultancy and IT Management (20 credits) CMP6235 Applications Solutions Development (20 credits)
CMP6200 Individual Honours Project (40 credits)	

UAE full time delivery

All modules are 20 credits unless indicated otherwise.

SEMESTER ONE	SEMESTER TWO
Level 3	
Fundamental Mathematics Academic and Personal Study Skills Web Application Design	Audio/Video Fundamentals Independent Practice Foundations of Programming
Level 4	
Computer Systems Computational Thinking & Professional Development Introduction to Programming	Applied Operating Systems Network Fundamentals Innovation Project
Level 5	
Database Systems Development Server Systems Networking Technologies	Enterprise Practice Project Human Computer Interaction Applied Programming
Level 6	
Business Systems Solutions DevOps and Enterprise Automation	Consultancy & IT Management Application Solutions Development
Individual Honours Project (40 credits)	

15	Overall Student Workload and Balance of Assessment

Overall student *workload* consists of class contact hours, independent learning and assessment activity, with eachcredit taken equating to a total study time of around 10 hours. While actual contact hours may depend on the optional modules selected, the following information gives an indication of how much time students will need to allocate to different activities at each level of the course.

- *Scheduled Learning* includes lectures, practical classes and workshops, contact time specified in timetable
- *Directed Learning* includes placements, work-based learning, external visits, on-line activity, Graduate+,peer learning
- *Private Study* includes preparation for exams

The *balance of assessment* by mode of assessment (e.g. coursework, exam and in-person) depends to some extent on the optional modules chosen by students. The approximate percentage of the course assessed by coursework, exam and in-person is shown below.

Level 3

Workload

30% time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	360
Directed Learning	372
Private Study	480
Total Hours	1212

Balance of Assessment

Assessment Mode	Percentage
Coursework	83%
Exam	0
In-Person	17%

Level 4

Workload

25% time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	294
Directed Learning	568
Private Study	338
Total Hours	1200

Balance of Assessment

Assessment Mode	Percentage
Coursework	67%
Exam	0%
In-Person	33%

Level 5

Workload

24% time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	288
Directed Learning	362
Private Study	550
Total Hours	1200

Balance of Assessment

Assessment Mode	Percentage
Coursework	50%
Exam	8%
In-Person	42%

Level 6

Workload

17% time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	202
Directed Learning	316
Private Study	682
Total Hours	1200

Balance of Assessment

Assessment Mode	Percentage
Coursework	75%
Exam	0%
In-Person	25%