Programme specification

1. Overview/ factual information

Programme/award title(s)	FdSc (Hons) Computer Science
Teaching Institution	The University Centre Peterborough
Awarding Institution	The Open University (OU)
Date of first OU validation	Nov 2020
Date of latest OU (re)validation	N/A
Next revalidation	
Credit points for the award	240
UCAS Code	GO20
HECoS Code	
LDCS Code (FE Colleges)	
Programme start date and cycle of starts if appropriate.	September 2021
Underpinning QAA subject benchmark(s)	Computing
Other external and internal reference points used to inform programme outcomes. For apprenticeships, the standard or framework against which it will be delivered.	The British Computing Society Local Enterprise Partnership or equivalent: Cambridgeshire & Peterborough Independent Economic Review.
Professional/statutory recognition	N/A
For apprenticeships fully or partially integrated Assessment.	N/A
Mode(s) of Study (PT, FT, DL, Mix of DL & Face-to-Face) Apprenticeship	FT
Duration of the programme for each mode of study	2 years in full time mode
Dual accreditation (if applicable)	N/A

Date of production/revision of this specification	

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 s/he 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 module can be found in student module guide(s) and the student's handbook.

The accuracy of the information contained in this document is reviewed by the University and may be verified by the Quality Assurance Agency for Higher Education.

2.1 Educational aims and objectives

To enable the student to:

- gain an in-depth knowledge and understanding of the concepts of Computing and Information Systems
- Apply the methods and principles of Computing and Information Systems in the analysis, design, and implementation of solutions in a range of application domains.
- Develop a range of transferable skills needed to cope with a rapidly changing IS environment
- Apply a systematic, creative and flexible approach to problem solving
- Develop knowledge and skills relevant to working as a member of a project team
- Develop awareness of professional and ethical aspects of the IT industry
- Understand, critically appraise and contribute to research in the Information Systems domain
- Develop a range of transferable skills and competencies needed to cope with a rapidly changing labour market and wider environment
- Provide students with the skills and motivation to enable them to participate fully in civic life
- Progress to post-graduate higher education

2.2 Relationship to other programmes and awards

(Where the award is part of a hierarchy of awards/programmes, this section describes the articulation between them, opportunities for progression upon completion of the programme, and arrangements for bridging modules or induction)

UCP also offers a BSc in Computer Science. Students completing the Foundation Degree can top up to a full degree if they achieve a merit or higher. See section 6 Criteria for Admission below.

2.3 For Foundation Degrees, please list where the 60 credit work-related learning takes place. For apprenticeships an articulation of how the work based learning and academic content are organised with he award.
Work Based Learning 1 (15) Understanding the Work Sector (15) Work-based Project (30)

2.4 List of all exit awards
- Certificate of Higher Education (CertHE) upon successful completion of 120 credits at Level 4 - FdSc Computer Science

3. Programme structure and learning outcomes

FdSc Computer Science

<table>
<tr><td colspan="6" align="center">Programme Structure - LEVEL 4 – Full time</td></tr>
<tr>
<th>Compulsory modules</th>
<th>Credit points</th>
<th>Optional modules</th>
<th>Credit points</th>
<th>Is module compensatable?</th>
<th>Semester runs in</th>
</tr>
<tr><td>Programming Concepts</td><td>15</td><td></td><td></td><td>Yes</td><td>1</td></tr>
<tr><td>System Design & Development</td><td>30</td><td></td><td></td><td>Yes</td><td>1</td></tr>
<tr><td>Developing Professional Skills</td><td>15</td><td></td><td></td><td>Yes</td><td>2</td></tr>
<tr><td>Network Essentials</td><td>15</td><td></td><td></td><td>Yes</td><td>2</td></tr>
<tr><td>Web Design & Development</td><td>15</td><td></td><td></td><td>Yes</td><td>2</td></tr>
<tr><td>Work Based Learning 1</td><td>15</td><td></td><td></td><td>Yes</td><td>2</td></tr>
<tr><td>Understanding the Work Sector</td><td>15</td><td></td><td></td><td>Yes</td><td>1</td></tr>
</table>

Work-related modules in bold

Intended learning outcomes at Level 4 are listed below:

Learning Outcomes – LEVEL 4

3A. Knowledge and understanding

Learning outcomes:	Learning and teaching strategy/ assessment methods
On successful completion of the course a student will be expected to be able to: A1: Understand the principles, theory and practice of the development of information systems and computer applications. A2: Demonstrate knowledge and understanding of the tools needed to develop professionally in specialist areas of information systems. A3: Demonstrate knowledge and understanding of the need to act in a professional and ethical manner.	A diverse and dynamic range of **teaching and learning strategies** are utilised to meet the knowledge-based learning outcomes of this level. These include: - traditional methods of lectures supported with seminars - practical workshops Lectures provide the guiding theme for subject areas within the discipline, directing and coordinating learning as well as responding to student needs for detailed explanation and demonstration. Lectures also provide an opportunity for students to develop a sense of community and establish the learning culture of the cohort. Seminars and practical sessions allow students to develop analytical and practical skills. These sessions provide a moderated reference for group behaviour where students can gain the confidence for independent learning by making their own contributions to the understanding of the subject. A broad range of **assessment methods** are utilised at this level to assess knowledge and understanding. These will include traditional assessment methods like course work essays, presentations, and exams; to forms of assessment that align with or simulate, those found in industry e.g. reports, product demonstrations and group assessments/appraisals.

	The programme also utilises formative assessment with a view to supporting students take responsibility for their learning.

3B. Cognitive skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
On successful completion of the course a student will be expected to be able to: B1: Design applications and systems to meet given requirements; the process involving problem identification, analysis, and design of a system with accompanying documentation B2: Identify a major field of personal learning and demonstrate broad knowledge within it B3: Demonstrate a capacity for conceptual and logical thinking	A diverse and dynamic range of **teaching and learning strategies** are utilised to meet the intellectual, learning outcomes of this level. These include traditional lectures and seminars but also practical workshops. Seminars and practical sessions allow students to develop analytical and practical skills. These sessions provide a moderated reference for group behaviour where students can gain the confidence for independent learning by making their own contributions to the understanding of the subject. Various modules provide a learning environment where specific skills are taught and demonstrated on simple problems before providing less well specified problems that allow a greater range of solution strategies. A broad range of **assessment methods** are utilised at this level to assess cognitive learning outcomes. These include traditional assessment methods like course work essays, presentations, and exams; to forms of assessment that align with or simulate, those found in industry e.g. product demonstrations, group evaluations. Exams and in-class tests are utilised for testing and developing students' problem-solving abilities under pressure. Formative assessment methods are used to enable learners to reflect on their academic progress and their career aspirations.

3C. Practical and professional skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
On successful completion of the course a student will be expected to be able to: C1: Select appropriate tools needed to develop professionally in specialist areas of information systems C2: Act in an ethical manner in relation to working in ICT C3: Work as a member of a development team, interacting with others and recognising the different roles within a team and different ways of organising teams.	A diverse and dynamic range of **teaching and learning strategies** are employed to meet the practical and professional learning outcomes of this level. These include traditional lecture and seminar approaches to practical workshops and group learning environments. Various modules provide a learning environment where specific skills are taught and demonstrated on simple problems before providing less well specified problems that allow a greater range of solution strategies. A broad range of **assessment methods** are utilised in this course to assess practical and professional skills from traditional essays and exams to reports and product demonstrations. Technical areas such as analysis, design and networking are assessed within modules through a variety of techniques that are appropriate to the subject area and provide feedback on subject specific skills.

3D. Key/transferable skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
On successful completion of the course a student will be expected to be able to: D1: Work independently, acting on their own initiative on a project where they are responsible for setting realistic goals, meeting deadlines, responding to feedback, and taking appropriate remedial action where necessary.	A diverse and dynamic range of **teaching and learning strategies** will be utilised to meet the affective and transferrable learning outcomes of this course. All modules are supported by a VLE which helps to disseminate material and encourages feedback through discussion groups. This also helps to establish a wider sense of audience and the skills needed for interaction in a virtual environment. Students of different abilities can gain

D2: Communicate clearly and appropriately, demonstrating a sense of audience.	from taking different paths though material and can get instant feedback through online tests and peer review. A broad range of **assessment methods** will be utilised in this course to assess affective transferable skills. These include demonstrations, presentations and group assessments

Exit Awards: Certificate of Higher Education (CertHE) upon successful completion of 120 credits at Level 4

Programme Structure - LEVEL 5 Full-time					
Compulsory modules	**Credit points**	**Optional modules**	**Credit points**	**Is module compensatable?**	**Semester runs in**
Developing Interactive Web	15			Yes	1
Computing Research Project	30			Yes	1&2
Advanced Database Design	15			Yes	1
Principles of Digital Security	15			Yes	2
Work-based Project	30			No	2
		Object-Oriented Programming	15	Yes	1
		Advanced Network Switching and Routing	15	Yes	1
		Emerging Technology	15	Yes	1

Work-related modules in bold

Intended learning outcomes at Level 5 are listed below:

Learning Outcomes – LEVEL 5	
3A. Knowledge and understanding	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
On successful completion of the course a student will be expected to be able to: A1: Understand the principles, theory and practice of the development of information systems and computer applications. A2: Demonstrate knowledge and understanding of the tools needed to develop professionally in specialist areas of information systems. A3: Demonstrate knowledge and understanding of the need to act in an ethical manner, demonstrating political, social and cultural awareness	A diverse and dynamic range of **teaching and learning strategies** are utilised to meet the knowledge-based learning outcomes at level 5. These include standard approaches like lectures supported by seminars but also workshops. Lectures provide the guiding theme for subject areas within the discipline, directing and coordinating learning as well as responding to student needs for detailed explanation and demonstration. Lectures also provide an opportunity for students to develop a sense of community and establish the learning culture of the cohort. Seminars and practical sessions allow students to develop analytical and practical skills. These sessions provide a moderated reference for group behaviour where students can gain the confidence for independent learning by making their own contributions to the understanding of the subject. Knowledge and understanding is assessed via a range of assessments as specified in the individual modules. Methods include case studies, examinations, use of VLEs and reports of practical work.

3B. Cognitive skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
On successful completion of the course a student will be expected to be able to: B1: Design and develop applications to meet given requirements; the process involving problem identification, analysis, and design of a system with accompanying documentation B2: Identify a major field of personal learning and demonstrate broad knowledge within it B3: Demonstrate a capacity for conceptual and logical thinking	A diverse and dynamic range of **teaching and learning strategies** are drawn on to meet the cognitive learning outcomes of this level. For the most part cognitive skills are taught through practical workshops in which students are supported to design applications and trial them. A broad range of **assessment methods** are employed at this level to assess intellectual and cognitive skills. Greater use of reflexive assessments is made to support increased self-awareness and the capacity to work independently. Both of these abilities are needed at level 6. Technical areas such as analysis, design and networking are assessed within modules through a variety of techniques that are appropriate to the subject area and provide feedback on subject specific skills.

3C. Practical and professional skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
On successful completion of the course a student will be expected to be able to: C1: Select appropriate tools needed to develop professionally in specialist areas of information systems C2: Act in an ethical manner in relation to working in ICT	A diverse and dynamic range of **teaching and learning strategies** are utilised to meet the practical and affective learning outcomes of this level. At this level much greater emphasis is given to group work and peer evaluation so that students can learn to work effectively as a team. A broad range of **assessment methods** are utilised at this level to assess practical and affective skills. These include assessment tasks that align more closely with the kinds of tasks that students will be expected to

| C3: Work as a member of a development team, interacting with others and recognising the different roles within a team and different ways of organising teams | perform in the workplace like reports, briefings, and presentations. The group project provides a substantial problem where the different skills and abilities of students need to be organised and effective cooperation is essential for success. Group assessments help to bring out critical appraisal between members of a group that provides a valuable lesson for self-appraisal. |

3D. Key/transferable skills	
Learning outcomes:	**Learning and teaching strategy/ assessment methods**
D1: Work independently, acting on their own initiative on a project where they are responsible for setting realistic goals, meeting deadlines, reflecting on feedback, and taking appropriate remedial action where necessary D2: Communicate clearly and appropriately, demonstrating a sense of audience.	A diverse and dynamic range of **teaching and learning strategies** are drawn on to meet the key transferable learning outcomes at this level. These include scaffolding students to work more independently and the use of problem-solving group activities in class. A broad range of **assessment methods** are employed at this level to assess transferable skills. Individual and group presentations and demonstrations are utilised frequently at this level.

Exit Award: FdSc Computer Science

4. Distinctive features of the programme structure

- **Where applicable, this section provides details on distinctive features such as:**
- ➢ where in the structure above a professional/placement year fits in and how it may affect progression
- ➢ any restrictions regarding the availability of elective modules
- ➢ where in the programme structure students must make a choice of pathway/route
- **Additional considerations for apprenticeships:**
- ➢ how the delivery of the academic award fits in with the wider apprenticeship
- ➢ the integration of the 'on the job' and 'off the job' training
- ➢ how the academic award fits within the assessment of the apprenticeship

The FdSc provides a progression route for students taking BTEC at Stamford and Peterborough College. It is designed for students that want a solid knowledge-base in IT and who want a quick route into the jobs market. The programme offers work experience at level 4 and 5 in the Work Based Learning module and the Work Based Project. Students completing the programme and achieving a merit can top up their foundation degree to a BSc in Computer Science.

5. Support for students and their learning.
(For apprenticeships this should include details of how student learning is supported in the work place)

Whilst studying at UCP, students are provided with academic support through a variety of mechanisms. Regular tutorial sessions are built into all courses delivered at UCP to provide students with the opportunity to access specialist support from their lecturers. Sessions provide both group and one to one assessment support for students, allowing them to gain formative feedback on work and discuss their overall performance on the course and address any welfare concerns. Each tutorial scheme has learning partnership as its core theme, with the Level 4 tutorial scheme focussing on preparing to study and academic skills and Level 5 on developing skills and autonomy skills. Tutors have an open office policy and the HE Managers host a daily student surgery so that concerns can be addressed promptly.

UCP also offers an additional Study Excellence programme which students can access if further support is required in developing more generic academic and employability skills. A series of optional lunch-time sessions covers issues such as developing academic writing techniques, undertaking effective academic research to support dissertations, and forming coherent and well-structured arguments.

To further underline the importance that UCP places on the development of these skills, the institution used the revalidation of the ARU provision to introduce a new approach to developing Academic Skills into each year of the revised courses, either as stand-alone

modules or through embedding the content into other relevant modules. The module aims to formalise the topics delivered within the Study Excellence programme, providing students with academic credit for completing the modules. Commencing for all new entrants in 2019, modules at Level 4 will introduce and develop the underpinning skills required for higher education study, with each year that follows providing a more contextual focus on the academic skills required in the discipline. An example of a distinct module which has been developed to achieve this is the Academic and Professional Skills for Social Scientists which is a core module for all students on social science degrees.

UCP also offers additional English as an Additional Language (EAL) lunchtime sessions for students who need extra help to articulate their ideas effectively. In common with Study Excellence, these sessions are available to any student who wishes to improve their grades; not just those at the lower end of the grade profile. Statistical analysis has evidenced that students who habitually use UCP's EAL support from the start of their studies achieve a higher classification than those who decline the support.

Following a successful trial within the BA (Hons) Psychosocial Studies course, UCP has adopted an approach to offer peer support to students via a Vertical Mentoring Scheme. It was initially identified that mature students were less likely to participate in extracurricular activities due to external commitments, yet extracurricular activities enhance student experience and performance. The Vertical Mentoring Scheme was established to try to improve mature student engagement. Initially, the initiative was piloted on Batchelor Degree programmes with Level 6 students mentoring Level 4 students over lunch times. They were fully trained to scaffold support and provide effective mentoring. Subsequently, alumni mentors took over this role and provided help and guidance to Levels 4, 5 and 6. Qualitative feedback revealed improved engagement in activities on and off campus. Statistical analysis of grade profiles and NSS satisfaction highlighted substantial improvements. Due to its success, the scheme is being introduced into a variety of other undergraduate courses including Foundation Degrees and has been formally recognised as an area of focus within the UCP Teaching and Student Outcomes Strategy, and therefore we will utilise this practice on the new programme.

A dedicated Student Support Team ensures that there is easy access to a variety of services which can support students throughout their studies at UCP. The Student Support Officer and Student Advisor have ensured that the evolving needs of students in academic, pastoral and professional contexts can be supported. The team, working closely with the Student Officer, provides information and guidance on issues surrounding employability (explained further below), mental health, mitigations and extensions, and financial management, via a range of activities from one to one advice sessions to large scale organised events. Issues surrounding the support of students are carefully considered at a number of institutional committee meetings, with updates and statistical reporting (on elements such as correlations in late submissions, number of extensions etc.) being consistently provided at Student Engagement Learning and Teaching Committee and Academic Board.

To further enhance the institution's interaction with local industry representatives, a new Employer and Community Consultative Group was established in March 2019. The group, which has evolved from the HE Steering Group, will provide crucial input into how the curriculum will develop to ensure that UCP is producing employment-ready students, in subjects with recognised skills gaps in the local and regional economy. Initially chaired by the Chair of the UCP Council, the guidance provided by the group will be heard directly by

the senior authority at UCP, ensuring that the voice of employers is carefully considered when planning new courses or initiatives.

6. Criteria for admission
(For apprenticeships this should include details of how the criteria will be used with employers who will be recruiting apprentices.)

48 UCAS points with at least one qualification in a computing related subject:

- A-levels (DD)
- BTEC (PPP)
- Cambridge Technicals (PPP)
- Access to HE (45 credits)

GCSE English language and mathematics at a minimum of grade C or grade 4.

If English is not your first language you will require a recognised Level 2 English language qualification or an IELTS score of 6.0 (with 5.5 minimum in each skill) or an equivalent English Language qualification.

Admission to the programme is also possible for mature students without formal qualifications but with equivalent professional experience.

7. Language of study

English

8. Information about non-OU standard assessment regulations (including PSRB requirements)

N/A

9. For apprenticeships in England End Point Assessment (EPA).

(Summary of the approved assessment plan and how the academic award fits within this and the EPA)

N/A

10. Methods for evaluating and improving the quality and standards of teaching and learning.

The University Centre Peterborough has 25 years' experience of delivering HE courses. Where the delivery team are not appropriately qualified at the level they will be teaching, they have many years of previous professional experience in their specialist field and some work part time as consultants.

Each member of staff has consistently been graded in observations as good or better by the UCP/PRC quality department over the last 5 years. The department performs annual inspections for all subjects and also offers personal developmental coaches to improve and maintain teaching and learning standards. In addition, HE Managers at UCP conduct quality walk-ins during each semester to ensure consistent quality of provision.

Staff development is available at UCP/PRC at least three times a year and staff actively take part in training events (e.g. Ethics, Scholarly writing and use of new technologies). Each new member of staff at UCP undergoes training and induction by the HE Managers. HE Staff also participate in Learning Teaching and Assessment meetings once a month to share good practice.

UCP has Learning and Teaching lead for Higher Education to oversee the training needs of staff and to mentor and support applications for Higher Education Academy fellowship.

All the team attend the annual UCP HE Learning and Teaching Conference which focuses on developing pedagogical skills. In addition, module evaluation surveys are undertaken per semester, however the team regularly ask for feedback on module in class, via the student rep and at Student Engagement, Learning and Teaching meetings. This way modules can be constantly adapted to student feedback if appropriate.

10. Changes made to the programme since last (re)validation

This is a new programme. We are validating a Foundation Degree to cater for students currently studying HNC & HND at our Stamford Campus.

Annexe 1: Curriculum map

Annexe 1 - Curriculum map

This table indicates which study units assume responsibility for delivering (shaded) and assessing (✓) particular programme learning outcomes.

Level	Study module/unit	Programme outcomes										
		A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2
4	Programming Concepts	✓	✓		✓		✓	✓			✓	
	Web Design & Development	✓	✓		✓		✓	✓			✓	
	Developing Professional Skills		✓	✓	✓			✓		✓		✓
	Systems Design & Development	✓	✓		✓			✓			✓	
	Networking Essentials	✓	✓		✓		✓	✓				✓
	Work-based learning 1	✓		✓	✓		✓	✓		✓		✓
	Understanding the Work Sector		✓	✓	✓	✓			✓			✓

Level	Study module/unit	Programme outcomes										
		A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2
5	Developing Interactive Web		✓		✓			✓			✓	
	Computing Research Project	✓				✓	✓	✓		✓		✓
	Principles of Digital Security	✓			✓			✓	✓			✓
	Advanced Database Design	✓			✓			✓			✓	
	Work-based Project	✓	✓	✓	✓	✓		✓	✓	✓		✓
	Object Oriented Programming	✓			✓			✓			✓	
	Advanced Network Switching and Routing	✓	✓		✓		✓	✓				✓
	Emerging Technology	✓		✓			✓		✓		✓	