



Programme Specification

1. Overview / Factual Information

| | |
|---|---|
| Programme/award title(s) | BSc (Hons) Computer Science BSc (Hons) Computer Science (Software Development) BSc (Hons) Computer Science (Networking) BSc (Hons) Computer Science (Cyber Security) |
| Teaching institution | University Centre Peterborough (UCP) |
| 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 | 360 |
| UCAS Code | GG45 |
| 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. | 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, PT |
| Duration of the programme for each mode of study | 3 years in full-time mode 4 years in part-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 they take 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 the student module guide(s) and the student handbook.

The accuracy of the information 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 Computer Science.
- Apply the methods and principles of Computer Science 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 the 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

UCP also offers an FD in Computer Science. Students completing this course are eligible for advanced entry to the BSc Computer Science degree.

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 the award.

N/A



2.4 List of all exit awards

- Certificate of Higher Education (CertHE) upon successful completion of 120 credits at Level 4.
- Diploma of Higher Education (DipHE) upon successful completion of 240 credits at Levels 4 and 5.
- Ordinary Degree (BSc) upon successful completion of 300 credits (60 credits at Level 6).

| BSc Computer Science & Pathways | | | | | | |
|--|---------------|---|----------------|--------------------------|-------------------------|--|
| <u>Programme Structure – Level 4 – Full Time</u> | | | | | | |
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in | |
| Programming Concepts | 15 | | | Yes | Sem 1 | |
| System Design & Development | 30 | | | No | Sem 1 | |
| Developing Professional Skills | 15 | | | No | Sem 2 | |
| Network Essentials | 15 | | | Yes | Sem 2 | |
| Web Design & Development | 15 | | | Yes | Sem 2 | |
| Introduction to Cloud Computing | 15 | | | Yes | Sem 2 | |
| | | User Experience and Interaction Design Games Design Managing a successful Computing Project | 15 15 15 | Yes Yes Yes | Sem 1 Sem 1 Sem 1 | |
| <u>Programme Structure - Level 4 – Part-Time</u> | | | | | | |
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in | |
| Programming Concepts | 15 | | | Yes | Y1 S1 | |
| System Design & Development | 30 | | | No | Y1 S1 | |
| Developing Professional Skills | 15 | | | No | Y1 S2 | |
| Network Essentials | 15 | | | Yes | Y1 S2 | |
| Web Design & Development | 15 | | | Yes | Y1 S2 | |
| Introduction to Cloud Computing | 15 | | | Yes | Y2 S2 | |
| | | User Experience and Interaction Design Games Design Managing a successful Computing Project | 15 15 15 | Yes Yes Yes | Y2 S2 Y2 S2 Y2 S2 | |

Intended learning outcomes at Level 4 are listed below:

| <u>Learning Outcomes – Level 4</u> | |
|--|--|
| 3a. Knowledge and understanding | |
| Learning outcomes: | Learning and teaching strategy / assessment methods |
| A1 Understand the principles, theory and practice of the development of information systems and computer applications. | A diverse and dynamic range of teaching and learning strategies are utilised to meet the knowledge-based learning outcomes of this level. These include: <ul style="list-style-type: none"> - Traditional methods of lectures supported with seminars. - Practical workshops. <p>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.</p> <p>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.</p> |
| A2 Demonstrate knowledge and understanding of the tools needed to develop professionally in specialist areas of information systems. | A broad range of assessment methods are utilised at this level to assess knowledge and understanding. These will include traditional assessment methods like coursework, 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. |
| A3 Demonstrate knowledge and understanding of the need to act in an ethical manner, demonstrating political, social and cultural awareness | The programme also utilises formative assessment with a view to supporting students with taking responsibility for their learning. |

| 3b. Cognitive skills | |
|--|--|
| Learning outcomes: | Learning and teaching strategy / assessment methods |
| B1 Design applications and systems to meet given requirements; the process involving problem identification, analysis, and design of a system with accompanying documentation. | 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. |
| B2 Identify a major field of personal learning and demonstrate broad knowledge within it. | 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. |
| B3 Demonstrate capacity for systematic, conceptual and critical thinking. | A broad range of assessment methods are utilised at this level to assess cognitive learning outcomes. These include traditional assessment methods like coursework, essays, presentations, and exams, to forms of assessment that align with or simulate those found in industry, e.g. product demonstrations and 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 |
| C1 Select appropriate tools needed to develop professionally in specialist areas of information systems | 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. |
| C2 Act in an ethical manner in relation to working in ICT. | |
| C3 Work as a member of a development team, interacting with others, encouraging co-operative working, able to take a lead role when appropriate, recognising the different roles within a team and different ways of organising teams. | 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 |
| 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 broader sense of audience and the skills needed for interaction in a virtual environment. Students of different abilities can gain from taking different paths through material and can get instant feedback through online tests and peer reviews. |
| D2 Communicate clearly and appropriately, demonstrating a sense of audience. | 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 Award: Certificate of Higher Education (CertHE) upon successful completion of 120 credits at Level 4

BSc Computer Science

| <u>Programme Structure - Level 5 Full-Time</u> | | | | | |
|---|---------------|--|--|--|--|
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Developing Interactive Web Computing Research Project | 15 | | | Yes | Sem 1 |
| Advanced Database Design | 30 | | | No | Sem 1 & 2 |
| Principles of Digital Security | 15 | | | Yes | Sem 1 |
| | 15 | Object-Oriented Programming Development Database-Driven Web Advanced Programming Techniques & Patterns Advanced Network Switching and Routing Management of IT Wireless Networking and IoT e-commerce & e-crime Business Intelligence Emerging Technology Games Development | 15 15 15 15 15 15 15 15 15 15 | Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes | Sem 2 Sem 2 Sem 2 Sem 1 Sem 2 Sem 2 Sem 2 Sem 2 Sem 1 Sem 2 |

| <u>Programme Structure - Level 5 Part-Time</u> | | | | | |
|---|---------------|--|--|--|--|
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Developing Interactive Web Computing Research Project | 15 | | | No | Y3 S1 |
| Advanced Database Design | 30 | | | No | Y2 S1 & 2 |
| Principles of Digital Security | 15 | | | Yes | Y2 S1 |
| | 15 | Object-Oriented Programming Development Database-Driven Web Advanced Programming Techniques & Patterns Advanced Network Switching and Routing Management of IT Wireless Networking and IoT e-commerce & e-crime Business Intelligence Emerging Technology Games Development | 15 15 15 15 15 15 15 15 15 15 | Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes | Y3 S2 Y3 S2 Y3 S2 Y3 S1 Y3 S2 Y3 S2 Y3 S2 Y3 S2 Y3 S1 Y3 S2 |

BSc Computer Science (Software Development)

| <u>Programme Structure - Level 5 Full-Time</u> | | | | | |
|--|---------------|------------------|---------------|--------------------------|------------------|
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Developing Interactive Web | 15 | | | No | Sem 1 |
| Computing Research Project | 30 | | | No | Sem 1 & 2 |
| Advanced Database Design | 15 | | | Yes | Sem 1 |
| Principles of Digital Security | 15 | | | No | Sem 2 |
| Object-Oriented Programming Development | 15 | | | Yes | Sem 1 |
| Database-Driven Web | 15 | | | Yes | Sem 2 |
| Advanced Programming Techniques & Patterns | 15 | | | Yes | Sem 2 |
| <u>Programme Structure - Level 5 Part-Time</u> | | | | | |
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Developing Interactive Web | 15 | | | No | Y3 S1 |
| Computing Research Project | 30 | | | No | Y2 S1 & 2 |
| Advanced Database Design | 15 | | | Yes | Y2 S1 |
| Principles of Digital Security | 15 | | | No | Y2 S2 |
| Object-Oriented Programming Development | 15 | | | Yes | Y3 S1 |
| Database-Driven Web | 15 | | | Yes | Y3 S2 |
| Advanced Programming Techniques & Patterns | 15 | | | Yes | Y3 S2 |

BSc Computer Science (Networking)

| <u>Programme Structure – Level 5 Full-Time</u> | | | | | |
|--|---------------|------------------|---------------|--------------------------|------------------|
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Developing Interactive Web | 15 | | | No | Sem 1 |
| Computing Research Project | 30 | | | No | Sem 1 & 2 |
| Advanced Database Design | 15 | | | Yes | Sem 1 |
| Principles of Digital Security | 15 | | | No | Sem 2 |
| Advanced Network Switching and Routing | 15 | | | Yes | Sem 1 |
| Management of IT | 15 | | | Yes | Sem 2 |
| Wireless Networking and IoT | 15 | | | Yes | Sem 2 |
| <u>Programme Structure - Level 5 Part-Time</u> | | | | | |
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Developing Interactive Web | 15 | | | No | Y3 S1 |
| Computing Research Project | 30 | | | No | Y2 S 1& 2 |
| Advanced Database Design | 15 | | | Yes | Y2 S1 |
| Principles of Digital Security | 15 | | | No | Y2 S2 |
| Advanced Network Switching and Routing | 15 | | | Yes | Y3 S1 |
| Management of IT | 15 | | | Yes | Y3 S2 |
| Wireless Networking and IoT | 15 | | | Yes | Y3 S2 |

BSc Computer Science (Cyber Security)

Programme Structure – Level 5 Full-Time

| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
|---|---------------|---|---------------|--------------------------|--------------------|
| Developing Interactive Web Computing Research Project | 15 30 | | | Yes No | Sem 1 Sem 1 & 2 |
| Advanced Database Design | 15 | | | Yes | Sem 1 |
| Principles of Digital Security | 15 | | | No | Sem 2 |
| management of IT | 15 | | | Yes | Sem 2 |
| e-commerce & e-crime | 15 | | | Yes | Sem 2 |
| | | Object-Oriented Programming Development Advanced Network Switching and Routing | 15 15 | Yes Yes | Sem 1 Sem 1 |

Programme Structure – Level 5 Part-Time

| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
|---|---------------|---|---------------|--------------------------|--------------------|
| Developing Interactive Web Computing Research Project | 15 30 | | | Yes No | Y3 S1 Y2 S1 & 2 |
| Advanced Database Design | 15 | | | Yes | Y2 S1 |
| Principles of Digital Security | 15 | | | No | Y2 S2 |
| management of IT | 15 | | | Yes | Y3 S2 |
| e-commerce & e-crime | 15 | | | Yes | Y3 S2 |
| | | Object-Oriented Programming Development Advanced Network Switching and Routing | 15 15 | Yes Yes | Y3 S1 Y3 S1 |

Intended learning outcomes at Level 5 are listed below:

| <u>Learning Outcomes – Level 5</u> | |
|---|---|
| 3a. Knowledge and understanding | |
| Learning outcomes: | Learning and teaching strategy / assessment methods |
| 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. | <p>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.</p> <p>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.</p> <p>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.</p> |

3b. Cognitive skills

| Learning outcomes: | Learning and teaching strategy / assessment methods |
|--|---|
| B1 Design and develop applications to meet given requirements; the process involving problem identification, analysis, and design of a system with accompanying documentation. | 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. |
| B2 Identify a major field of personal learning and demonstrate broad knowledge within it. | 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. |
| B3 Demonstrate capacity for systematic, conceptual and critical thinking. | 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 |
|--|--|
| C1 Select appropriate tools needed to develop professionally in specialist areas of information systems. | 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. |
| C2 Act in an ethical manner in relation to working in ICT. | |
| C3 Work as a member of a development team, interacting with others, encouraging co-operative working, able to take a lead role when appropriate, recognising the different roles within a team and different ways of organising teams. | 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 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. | 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. |
| D2 Communicate clearly and appropriately, demonstrating a sense of audience. | 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. |

Diploma of Higher Education (DipHE) upon successful completion of 240 credits at Levels 4 and 5

BSc Computer Science

Programme Structure - Level 6 – Full-Time

| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
|---------------------------------|---------------|---|--|--|---|
| Undergraduate Research Project | 30 | | | No | Sem 1 & 2 |
| Professional and Ethical Issues | 15 | | | No | Sem 1 |
| Agile Team Development | 15 | | | No | Sem 2 |
| Big Data & Data Mining | 15 | | | Yes | Sem 1 |
| | | AI Programming Mobile Application Development Full Stack Application Development Enterprise Networking Ethical Hacking Cryptography Digital Forensics | 15 15 15 30 15 15 15 | Yes Yes Yes No Yes Yes Yes | Sem 1 Sem 2 Sem 2 Sem 2 Sem 1 Sem 1 Sem 2 |



| <u>Programme Structure - Level 6 Part-Time</u> | | | | | |
|--|---------------|--|--|--|---|
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Undergraduate Research Project | 30 | | | No | Y4 S1 & 2 |
| Professional and Ethical Issues | 15 | | | No | Y3 S1 |
| Agile Team Development | 15 | | | No | Y3 S2 |
| Big Data & Data Mining | 15 | | | Yes | Y4 S1 |
| | | Artificial Intelligence Mobile Application Development Full Stack Application Development Enterprise Networking Ethical Hacking Cryptography Digital Forensics | 15 15 15 30 15 15 15 | Yes Yes Yes No Yes Yes Yes | Y4 S1 Y4 S2 Y4 S2 Y4 S2 Y4 S1 Y4 S1 Y4 S2 |

BSc Computer Science (Software Engineering)

| <u>Programme Structure - Level 6 – Full-Time</u> | | | | | |
|--|---------------|------------------|---------------|--------------------------|------------------|
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Undergraduate Research Project | 30 | | | No | Sem 1 & 2 |
| Professional and Ethical Issues | 15 | | | No | Sem 1 |
| Agile Team Development | 15 | | | Yes | Sem 2 |
| Big Data & Data Mining | 15 | | | Yes | Sem 1 |
| AI Programming | 15 | | | Yes | Sem 1 |
| Mobile Application Development | 15 | | | Yes | Sem 2 |
| Full Stack Application Development | 15 | | | Yes | Sem 2 |
| <u>Programme Structure - Level 6 Part-Time</u> | | | | | |
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Undergraduate Research Project | 30 | | | No | Y4 S1 & 2 |
| Professional and Ethical Issues | 15 | | | No | Y3 S1 |
| Agile Team Development | 15 | | | Yes | Y3 S2 |
| Big Data & Data Mining | 15 | | | Yes | Y4 S1 |
| AI Programming | 15 | | | Yes | Y4 S1 |
| Mobile Application Development | 15 | | | Yes | Y4 S2 |
| Full Stack Application Development | 15 | | | Yes | Y4 S2 |

BSc Computer Science (Networking)

| <u>Programme Structure - Level 6 – Full-Time</u> | | | | | |
|--|---------------|------------------|---------------|--------------------------|------------------|
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Undergraduate Research Project | 30 | | | No | Sem 1 & 2 |
| Professional and Ethical Issues | 15 | | | Yes | Sem 1 |
| Agile Team Development | 15 | | | No | Sem 2 |
| Big Data & Data Mining | 15 | | | Yes | Sem 1 |
| Enterprise Networking | 30 | | | No | Sem 2 |
| Ethical Hacking | 15 | | | Yes | Sem 1 |
| <u>Programme Structure - Level 6 Part-Time</u> | | | | | |
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Undergraduate Research Project | 30 | | | No | Y4 S1 & 2 |
| Professional and Ethical Issues | 15 | | | Yes | Y3 S1 |
| Agile Team Development | 15 | | | No | Y3 S2 |
| Big Data & Data Mining | 15 | | | Yes | Y4 S1 |
| Enterprise Networking | 30 | | | No | Y4 S2 |
| Ethical Hacking | 15 | | | Yes | Y4 S1 |

BSc Computer Science (Cyber Security)

| Programme Structure - Level 6 – Full-Time | | | | | |
|---|---------------|---|--|--|---|
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Undergraduate Research Project | 30 | | | No | Sem 1 & 2 |
| Professional and Ethical Issues | 15 | | | No | Sem 1 |
| Agile Team Development | 15 | | | No | Sem 2 |
| Big Data & Data Mining | 15 | | | Yes | Sem 1 |
| | | AI Programming Mobile Application Development Full Stack Application Development Enterprise Networking Ethical Hacking Cryptography Digital Forensics | 15 15 15 30 15 15 15 | Yes Yes Yes No Yes Yes Yes | Sem 1 Sem 2 Sem 2 Sem 2 Sem 1 Sem 1 Sem 2 |
| Programme Structure - Level 6 Part-Time | | | | | |
| Compulsory modules | Credit points | Optional modules | Credit points | Is module compensatable? | Semester runs in |
| Undergraduate Research Project | 30 | | | No | Y4 S1 & 2 |
| Professional and Ethical Issues | 15 | | | No | Y3 S1 |
| Agile Team Development | 15 | | | No | Y3 S2 |
| Big Data & Data Mining | 15 | | | Yes | Y4 S1 |
| Ethical Hacking | 15 | | | Yes | Y4 S1 |
| Cryptography | 15 | | | Yes | Y4 S1 |
| Digital Forensics | 15 | | | Yes | Y4 S2 |

Intended learning outcomes at level 6 are listed below:

| <u>Learning Outcomes – Level 6</u> | |
|--|---|
| 3a. Knowledge and understanding | |
| Learning outcomes: | Learning and teaching strategy / assessment methods |
| A1 Understand the principles, theory and practice of the development of information systems and computer applications. | A diverse and dynamic range of teaching and learning strategies are utilised to meet the knowledge-based learning outcomes at this level. At level 6 students are supported to take greater responsibility for their own learning. |
| A2 Demonstrate knowledge and understanding of the tools needed to develop professionally in specialist areas of information systems. | Emphasis is given to directed study at level 6, this provides the in-depth material required for subject knowledge through reading books, papers, online articles and tutorials. Independent self-study is encouraged and supported by examples for directed study. This helps students develop their own learning and research practices and provides source material for specific tasks and projects. |
| A3 Demonstrate knowledge and understanding of the need to act in an ethical manner, demonstrating political, social and cultural awareness | A broad range of assessment methods are utilised at this level to assess knowledge and understanding. These include traditional assessment methods like coursework, essays, presentations and exams; to forms of assessment that align with or simulate those found in the industry, such as demonstrations or presentations. |

3b. Cognitive skills

| Learning outcomes: | Learning and teaching strategy / assessment methods |
|---|---|
| B1 Design and develop applications to meet given requirements; the process involving problem identification, analysis and design of a system with accompanying documentation. | <p>A diverse range of teaching and learning strategies will be utilised to meet the intellectual and cognitive learning outcomes at this level.</p> |
| B2 Identify a major field of personal learning and demonstrate broad knowledge within it. | <p>All modules are supported by a VLE which helps to disseminate material and encourages feedback through discussion groups. This also helps to establish a broader sense of audience and the skills needed for interaction in a virtual environment. Students of different abilities can gain from taking different paths through material and can get instant feedback through online tests and peer review.</p> |
| B3 Demonstrate a capacity for systematic, conceptual and critical thinking. | <p>A broad range of assessment methods will be utilised at this level to assess cognitive skills. These will include traditional assessment methods like coursework essays, presentations and exams; to forms of assessment that align with or simulate those found in industry, e.g. reports, briefing papers.</p> <p>The major project provides the environment where students develop the greatest autonomy and responsibility for the outcome. The strategy for supervision is focused on the framework and guidance rather than the operational or technical details unless requested.</p> |

3c. Practical and professional skills

| Learning outcomes: | Learning and teaching strategy / assessment methods |
|--|--|
| C1 Select appropriate tools needed to develop professionally in specialist areas of information systems. | A diverse and dynamic range of teaching and learning strategies are utilised to meet the practical and professional learning outcomes at this level. The major project provides the opportunity for a student to identify a suitable problem domain, develop and apply tools and techniques for its solution and evaluate the relative merits of their work. |
| C2 Act in an ethical manner in relation to working in ICT. | |
| C3 Work as a member of a development team; interacting with others, encouraging co-operative working, able to take a lead role when appropriate, recognising the different roles within a team and different ways of organising teams. | A broad range of assessment methods are utilised at this level to assess practical and professional skills. The major project has a substantial report that assesses the ability to describe technical matters, supported by appropriate references, and provide a coherent narrative of a development process and critical analysis of the work. |

| 3d. Key / transferable skills | |
|--|---|
| Learning outcomes: | Learning and teaching strategy / assessment methods |
| <p>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.</p> <p>D2 Communicate clearly and appropriately, demonstrating a sense of audience.</p> | <p>A diverse and dynamic range of teaching and learning strategies are utilised to meet the key / transferable learning outcomes at this level. Presentations assess communication skills and the ability to choose and develop a topic at an appropriate level of content for the audience and purpose. Demonstrations of software and systems assess the ability to explain technical processes and the rationale for the decisions made in its design development.</p> <p>A broad range of assessment methods are employed at this level to assess key / transferable skills. Oral presentation, report writing, technical documentation, electronic discussion presentation and written assignments are assessed by various modules.</p> <p>Presentations assess communication skills and the ability to choose and develop a topic at an appropriate level of content for the audience and purpose. Students use logbooks to record their personal progress through a subject domain and sources of information, their actions and results providing a lasting resource that is assessed for clarity, technical content and relevance.</p> |

Exit Award: Ordinary Degree (BSc) upon successful completion of 300 credits (60 credits at Level 6)

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 broader apprenticeship.
- The integration of 'on the job' and 'off the job' training.
- How the academic award fits within the assessment of the apprenticeship.

On commencing the course, students choose between the Computer Science programme, or one of three pathways leading to named awards:

- Computer Science (Software Development)
- Computer Science (Networking)
- Computer Science (Cyber Security)

These are tabulated in Annex 2 to this document. Whether a programme is 'and' or 'with' reflects the percentage of the programme dedicated to the additional subject – half (180 credits) for 'and'; a third (90 credits) for 'with'.

Students joining the course at level 6, after completing a Foundation Degree, follow the BSc Computer Science programme.

5. Support for students and their learning.

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 offer 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, level 5 on developing skills and autonomy and level 6 on progression and transferrable 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 cover 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 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 needed for the discipline. An example of a distinct module that 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, level 6 students mentored level 4 students over lunchtimes. 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 was introduced into a variety of other undergraduate courses in 2019 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 that 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 produces 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

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

- A-levels (DDE or CC)
- BTEC (MPP)
- Cambridge Technicals (MPP)
- Access to HE (45 credits)

FD Computer Science at UCP can start Level 6 of the BSc (Hons) Computing & Information Systems to obtain a full honours degree.

HNC Computing can start Level 5 of the BSc (Hons) Computer Science to obtain a full honours degree.

HND Computing can start Level 6 of the BSc (Hons) Computer Science to obtain a full honours degree.

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).

N/A

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

UCP 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 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 at least three times a year, and staff actively participate 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 a 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.

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

The programme went through a wide-ranging revalidation in 2016. Since this event, the course has undergone a number of small module and course amendments to respond to feedback from students and staff with regards to what works well and what required some changes to improve the learning and teaching experience.

Removal of most pass / fail elements in favour of fine graded assessments where students could be recognised and rewarded for going above and beyond the minimum expected brief. Rebalancing of assessment weightings in response to the changes to the pass / fail elements, and where some assessments had been underestimated in the scope of effort required by the student, these were given a higher weighting.

A few modules had the assessment method switched to better meet the learning outcomes defined.

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 | | | | | | | | | | |
|-------|---|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | A 1 | A 2 | A 3 | B 1 | B 2 | B 3 | C 1 | C 2 | C 3 | D 1 | D 2 |
| 4 | Programming Concepts | ✓ | ✓ | | ✓ | | ✓ | ✓ | | | ✓ | |
| | Web Design & Development | ✓ | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | |
| | Developing Professional Skills | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ |
| | Systems Design & Development | ✓ | ✓ | | ✓ | | | ✓ | | | ✓ | |
| | Networking Essentials | ✓ | ✓ | | ✓ | | ✓ | ✓ | | | ✓ | |
| | Introduction to Cloud Computing | ✓ | ✓ | ✓ | | | | ✓ | ✓ | | | ✓ |
| | Managing a Successful Computing Project | ✓ | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | ✓ |
| | Games Design | ✓ | ✓ | | ✓ | | | ✓ | | | | ✓ |
| | User Experience and Interaction Design | ✓ | ✓ | | ✓ | | ✓ | ✓ | | | ✓ | |



| Level | Study module/unit | Programme outcomes | | | | | | | | | | |
|-------|--|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | A 1 | A 2 | A 3 | B 1 | B 2 | B 3 | C 1 | C 2 | C 3 | D 1 | D 2 |
| 5 | Developing Interactive Web | | ✓ | | ✓ | | | ✓ | | | ✓ | |
| | Computing Research Project | ✓ | | | | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| | Principles of Digital Security | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | | ✓ |
| | Advanced Database Design | ✓ | | | | ✓ | | ✓ | | | ✓ | |
| | Object-Oriented Programming | ✓ | | | | ✓ | | ✓ | | | ✓ | |
| | Database Driven Web | | ✓ | | | ✓ | | ✓ | | | | ✓ |
| | Advanced Programming Techniques & Patterns | ✓ | | | | ✓ | | ✓ | ✓ | | | ✓ |
| | Advanced Network Switching and Routing | ✓ | ✓ | | | ✓ | | ✓ | ✓ | | | ✓ |
| | Management of IT | ✓ | | | | ✓ | | ✓ | ✓ | | | ✓ |
| | Wireless Networking and IoT | ✓ | | | | | | ✓ | ✓ | | | ✓ |
| | e-commerce & e-crime | | ✓ | | | | ✓ | | | ✓ | | ✓ |
| | Business Intelligence | ✓ | ✓ | | | ✓ | | ✓ | | | ✓ | |



| Level | Study module / unit | Programme outcomes | | | | | | | | | | |
|-------|------------------------------------|--------------------|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|
| | | A 1 | A 2 | A 3 | B1 | B 2 | B 3 | C 1 | C 2 | C 3 | D 1 | D 2 |
| 6 | Undergraduate Major Project | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| | Professional and Ethical Issues | | | ✓ | | | ✓ | | ✓ | ✓ | | ✓ |
| | Agile Team Development | ✓ | ✓ | | ✓ | | | ✓ | | | ✓ | |
| | Big Data & Data Mining | ✓ | | ✓ | | ✓ | ✓ | ✓ | | | | ✓ |
| | Artificial Intelligence | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ | | ✓ |
| | Mobile Application Development | ✓ | ✓ | | ✓ | | | ✓ | | | ✓ | |
| | Full Stack Application Development | ✓ | ✓ | | ✓ | | | ✓ | | | | ✓ |
| | Enterprise Networking | ✓ | ✓ | | ✓ | | | ✓ | | ✓ | ✓ | |
| | Ethical Hacking | ✓ | | ✓ | | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| | Cryptography | ✓ | | ✓ | | | ✓ | ✓ | | | ✓ | |
| | Digital Forensics | ✓ | | ✓ | | | ✓ | ✓ | | | | ✓ |

Annexe 2 – Programme Structure with Pathways

| | BSc (Hons) Computer Science | | BSc (Hons) Computer Science (Software Development) | | BSc (Hons) Computer Science (Networking) | | BSc (Hons) Computer Science (Cyber Security) | | Additional Optional Modules | |
|-------|-----------------------------|---------------------------------|--|---------------------------------|--|---------------------------------|--|---------------------------------|-----------------------------|---|
| Lvl 4 | 15 | Programming Concepts | 15 | Programming Concepts | 15 | Programming Concepts | 15 | Programming Concepts | | |
| | 15 | Web Design & Development | 15 | Web Design & Development | 15 | Web Design & Development | 15 | Web Design & Development | | |
| | 15 | Developing Professional Skills | 15 | Developing Professional Skills | 15 | Developing Professional Skills | 15 | Developing Professional Skills | | |
| | 30 | Systems Design & Development | 30 | Systems Design & Development | 30 | Systems Design & Development | 30 | Systems Design & Development | | |
| | 15 | Networking Essentials | 15 | Networking Essentials | 15 | Networking Essentials | 15 | Networking Essentials | 15 | Managing a Successful Computing Project |
| | 15 | Introduction to Cloud Computing | 15 | Introduction to Cloud Computing | 15 | Introduction to Cloud Computing | 15 | Introduction to Cloud Computing | 15 | Games Design |
| | 15 | L4 Option | 15 | L4 Option | 15 | L4 Option | 15 | L4 Option | 15 | User Experience and Interaction Design |

| | BSc (Hons) Computer Science | | BSc (Hons) Computer Science (Software Development) | | BSc (Hons) Computer Science (Networking) | | BSc (Hons) Computer Science (Cyber Security) | | Additional Optional Modules | |
|-------|-----------------------------|--------------------------------|--|--|--|--|--|--------------------------------|-----------------------------|-----------------------|
| Lvl 5 | 15 | Developing Interactive Web | 15 | Developing Interactive Web | 15 | Developing Interactive Web | 15 | Developing Interactive Web | | |
| | 30 | Computing Research Project | 30 | Computing Research Project | 30 | Computing Research Project | 30 | Computing Research Project | | |
| | 15 | Principles of Digital Security | 15 | Principles of Digital Security | 15 | Principles of Digital Security | 15 | Principles of Digital Security | | |
| | 15 | Advanced Database Design | 15 | Advanced Database Design | 15 | Advanced Database Design | 15 | Advanced Database Design | | |
| | 15 | L5 Option | 15 | Object-Oriented Programming | 15 | Advanced Network Switching and Routing | 15 | Option: ANSaR, OOP | 15 | Business Intelligence |
| | 15 | L5 Option | 15 | Database Driven Web | 15 | Management of IT | 15 | Management of IT | 15 | Emerging Technology |
| | 15 | L5 Option | 15 | Advanced Programming Techniques & Patterns | 15 | Wireless Networking and IOT | 15 | e-commerce & e-crime | 15 | Games Development |

| | BSc (Hons) Computer Science | | BSc (Hons) Computer Science (Software Development) | | BSc (Hons) Computer Science (Networking) | | BSc (Hons) Computer Science (Cyber Security) | | Additional Optional Modules | |
|-------|-----------------------------|---------------------------------|--|------------------------------------|--|---------------------------------|--|---------------------------------|-----------------------------|--|
| Lvl 6 | 30 | Undergraduate Major Project | 30 | Undergraduate Major Project | 30 | Undergraduate Major Project | 30 | Undergraduate Major Project | | |
| | 15 | Professional and Ethical Issues | 15 | Professional and Ethical Issues | 15 | Professional and Ethical Issues | 15 | Professional and Ethical Issues | | |
| | 15 | Agile Team Development | 15 | Agile Team Development | 15 | Agile Team Development | 15 | Agile Team Development | | |
| | 15 | Big Data & Data Mining | 15 | Big Data & Data Mining | 15 | Big Data & Data Mining | 15 | Big Data & Data Mining | | |
| | 15 | L6 Option | 15 | Artificial Intelligence | 30 | Enterprise Networking | 15 | Cryptography | | |
| | 15 | L6 Option | 15 | Mobile Application Development | | | 15 | Digital Forensics | | |
| | 15 | L6 Option | 15 | Full Stack Application Development | 15 | Ethical Hacking | 15 | Ethical Hacking | | |