



UNIVERSITY
OF LONDON

Programme Specification 2020–2021

Please note, there are two Programme Specifications included within this PDF document:

1. BSc and Diploma in Computing and Information Systems *and* Creative Computing (New Regulations), including provision for individual courses
2. Work Experience Entry routes *related to* BSc in Computing and Information Systems and BSc in Creative Computing (New Regulations)





**UNIVERSITY
OF LONDON**

Programme Specification 2020–2021

Computing and
Information Systems
Creative Computing
(New Regulations)

BSc
CertHE
Diploma
Individual courses
and Work Experience Entry routes

Important document – please read



IMPORTANT NOTICE FOR 2020-2021 ACADEMIC YEAR

Alternative Assessments during the Coronavirus (COVID-19) Outbreak

In these unprecedented times, the University has and continues to respond quickly to the impact of COVID-19, which has resulted in changes to our assessment processes.

In line with our current General Regulations, the University may offer you alternative assessments where necessary. This includes holding online timed assessments in place of written examinations, which are usually held at examination centres. Please note that this statement replaces any published information relating to assessments or written examinations in any of our materials including the website. Previously published materials relating to examinations should therefore be read in conjunction with this statement.

The University of London continues to work towards supporting the academic progression of all its students. The University also continues to be mindful of the health and wellbeing of its students during this pandemic, whilst protecting the academic standards of its awards.

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Important information regarding the Programme Specification

Last revised 26 August 2020

About this document

The Programme Specification gives a broad outline of the structure and content of the programme, the entry level qualifications, as well as the learning outcomes students will achieve as they progress. Some of the information referred to in this programme specification is included in more detail on the University of London website. Where this is the case, links to the relevant webpage are included.

Where links to external organisations are provided, the University of London is not responsible for their content and does not recommend nor necessarily agree with opinions expressed and services provided at those sites.

If you have a query about any of the programme information provided, whether here or on the website, registered students should use the *Ask a question* button in the [student portal](#); otherwise the *Contact Us* button on each webpage should be used.

Terminology

The following language is specific to the Computing programmes:

Course: Individual units of a programme are called courses. Each course is a self-contained, formally structured learning experience with a coherent and explicit set of learning outcomes and assessment criteria.

Key revisions made

Programme specifications are revised annually. The quality committee of Goldsmiths, University of London, as part of its annual review of standards, confirms the programme structure and the educational aims and learning outcomes, and advises on any development in student support.

Where changes have been made which may impact on continuing students, these are listed below. For all new students, the programme and general information provided in this document is correct and will be applicable for the current year.

Significant changes made to the Programme Specification 2020-2021:

No significant changes.

Programme title and qualifications

Programme titles

Computing and Information Systems

Creative Computing

Computing Studies (exit qualifications only)

Qualifications

Bachelor of Science in Computing and Information Systems (BSc)

Bachelor of Science in Creative Computing (BSc)

Certificate of Higher Education in Computing and Information Systems (CertHE)

Certificate of Higher Education in Creative Computing (CertHE)

Intermediate qualifications

Students may not normally receive an intermediate qualification and continue to a higher qualification, even if they are registered on the intermediate qualifications. The specific rules are given in the Programme Regulations under Structure of the programmes.

Exit qualifications

Certificate of Higher Education in Computing Studies (CertHE)*

Diploma of Higher Education in Computing Studies (DipHE)

An exit qualification is an intermediate qualification, [as noted above] for which the student has not registered at the outset but which may be awarded on completion of specific courses (or credit accumulated) in a longer programme of study, if the student leaves the programme.

Exit qualifications are awarded at the discretion of the Board of Examiners and once a student has accepted an exit qualification they will not normally be permitted to continue their study of the same programme with the University of London.

Individual courses

There is also provision for individual courses to be studied on a stand-alone basis. Students can select up to two Level 4 courses, without being registered for an award.

* Students may be eligible for the award of a CertHE Computing and Information Systems or a CertHE Creative Computing if they have successfully completed the four Level 4 courses (120 credits) that comprise the relevant CertHE.

Award titles may be abbreviated as follows:

Bachelor of Science – BSc

Certificate of Higher Education – CertHE

Diploma of Higher Education – DipHE

Level of the programmes

The Framework for Higher Education Qualifications in England, Wales and Northern Ireland (FHEQ) forms part of the UK Quality Code for Higher Education of the [Quality Assurance Agency for Higher Education](#) (QAA).

The awards are placed at the following Levels of the Framework for Higher Education Qualifications (FHEQ):

BSc – Level 6

CertHE – Level 4

DipHE – Level 5 (exit qualification only)

Relevant QAA subject benchmarks

Subject benchmarks set out national expectations about standards of degrees in a range of subject areas, as defined by the [Quality Assurance Agency](#).

The subject benchmarks for Computing can be found [here](#).

Awarding body

University of London

Registering body

University of London

Academic direction

Goldsmiths, University of London

Accreditation by professional or statutory body

Not applicable

Language of study and assessment

English

Mode of study

Independent or locally supported learning.

CertHE students are required to attend a part-time or full-time programme of study at a teaching centre that is recognised by the University to teach that programme.

The [website](#) provides information about and a directory of Recognised Teaching Centres.

Programme structures

The BSc in Computing and Information Systems degree consists of courses to the value of 360 credits as follows:

- Level 4 - four compulsory full courses (each 30 credits)
- Level 5 - four compulsory full courses (each 30 credits)
- Level 6 - six 15 credit courses chosen from a list of 15 credit course options, plus a compulsory 30 credit Project which is a core course.

The BSc in Creative Computing degree consists of courses to the value of 360 credits as follows:

- Level 4 - four compulsory full courses (each 30 credits)
- Level 5 - four compulsory full courses (each 30 credits)
- Level 6 - three 15 credit courses chosen from a list of 15 credit course options, plus three compulsory 15 credit courses, and a compulsory 30 credit Project which is a core course.

The CertHE in Computing and Information Systems and the CertHE in Creative Computing consist of:

- Level 4 - four compulsory full courses (each 30 credits)

Full details of the Schemes of Award are included in the [Programme Regulations](#).

Maximum and minimum periods of registration

The maximum and minimum periods of registration, from a student's effective date of registration, are:

BSc in Computing and Information Systems and BSc in Creative Computing

Entry route	Minimum	Maximum
Direct entry	3 years	8 years
Direct entry (where maximum recognition of prior learning has been granted)	2 years	8 years

Programme Specification 2020-2021 Computing and Information Systems and Creative Computing (BSc/CertHE /Individual courses

<i>Progressing from</i> CertHE	2 years	8 years, from effective date of registration for the CertHE
<i>Transferring from</i> Work Experience Entry Route	3 years	8 years, from effective date of registration for the BSc

CertHE in Computing and Information Systems and CertHE in Creative Computing

Minimum	Maximum
1 year	4 years

Credit-bearing Individual courses

Minimum	Maximum
1 year	2 years

Study materials are made available after registration and on payment of the applicable fee.

Credit value of courses

Further information about the credit systems used by universities in the UK and Europe is provided by the [Quality Assurance Agency](#) and the [European Credit Transfer and Accumulation System](#).

Where credits are assigned to each course of a programme, credit indicates the amount of learning carried out in terms of the notional number of study hours needed, and a specified FHEQ credit level indicates the depth, complexity and intellectual demand of learning involved. One UK credit equates to a notional ten hours of study. The details below indicate the UK credits and the European Credit Transfer and Accumulation System (ECTS) values.

For Computing and Information Systems and Creative Computing, credits are assigned to the courses as follows:

- 30 UK credits or 15 ECTS credits for a full course
- 15 UK credits or 7.5 ECTS credits for a half course

Recognition of prior learning

Recognition of prior learning is a generic term for the process by which we recognise and, where appropriate, award credit for a previously obtained qualification which includes a course or courses equivalent in level, content and standard to a course on our programme of study.

See the [General Regulations](#) (Section 3) for more rules relating to prior learning.

The University of London may recognise prior learning and grant you credit towards the award.

Further information on recognition of prior learning is on the [website](#).

Entrance requirements

Applicants must submit an application in line with the procedures and deadlines set out on the [website](#).

Details of the programme specific requirements are given on the programme pages, under the Requirements tab:

[Computing and Information Systems](#)

[Creative Computing](#)

We consider qualifications from around the world. Details are available [here](#) and in the [Qualifications for Entrance](#) schedule.

General entrance requirements for Undergraduate Degrees

Age:

Applicants must normally be at least 17 years of age on or before 30 November in the year of registration.

Qualifications:

Applicants must

- have achieved qualifications that satisfy category G in the Qualifications for Entrance schedule.
- meet any additional programme specific entrance requirements; and
- satisfy English language requirements.

General entrance requirements for Certificates of Higher Education

Applicants must submit an application in line with the procedures and deadlines set out on the [website](#).

All entrance requirements are set out in detail on the programme page in the [Requirements](#) section.

Qualifications:

Applicants must

- meet programme specific entrance requirements; and
- satisfy English language requirements.

General Entrance Requirements for Individual courses

As for General Entrance Requirements for Undergraduate Degrees, above, except CO1108 where the Mathematics requirement is GCE O-level grade C or equivalent.

English language requirements

Applicants must satisfy the English language requirements for the programme. These are set out in detail on the programme page under the Requirements tab.

Additional information on English language proficiency tests is given on the [website](#).

Where an applicant does not meet the prescribed English language proficiency requirements but believes that they can demonstrate the requisite proficiency for admission the University may, at its discretion, consider the application.

English language requirements are given on the programme pages, under the Requirements section:

[Computing and Information Systems](#)

[Creative Computing](#)

Internet access

Students will require regular access to a computer (or mobile device*) with an internet connection to use the University of London website and the Student Portal. These are where many of the programmes' study resources are located. A webcam may be required in the event that online timed assessments (if offered) are proctored, and in such a case, it is a student's responsibility to ensure that they have a webcam.

** Full mobile access to VLE resources is not available for all programmes.*

Computer requirements

Whether studying on their own or at a teaching centre, students will need access to the following equipment and software:

Hardware

The recommended minimum configuration is as follows:

- Processor: 2GHz
- Hard drive: 10GB – free
- Screen resolution: 1024 x 768 colour
- Networking: Network adapter – Ethernet, Fast Ethernet, Gigabit Ethernet
- RAM: 2GB
- Audio output Soundcard: stereo
- Sound card and speakers are also recommended for playing audio materials

At Level 5, for the BSc Computing and Information Systems, access to a suitable network is very important for full learning benefit. If a student does not have such access, it will not be impossible for them to complete the degree, but they will not have the same study experience as a student with this access. The highest level of access a student will require for effective study will be as a (temporary) network manager so that they can experiment

with configuration. In particular, lack of appropriate network access will affect their ability to study 'Data communications and enterprise networking' in the most effective way possible. Other machines, apart from those that are PC-compatible, are acceptable provided they run equivalent software.

Software

Students are advised to make use of common operating systems and software, as follows:

- Windows™ or Linux or Macintosh.
- Word processor, spreadsheet and database. No applications are recommended specifically, but under Windows™, an integrated package such as Microsoft Office is sufficient, while under Linux, OpenOffice is adequate.
- The Java SE Development Kit (JDK) version 6 or higher, available for free from oracle.com.
- For Level 6, additional software is required for some courses. This information is given under the course outlines.

Students with access requirements

The University of London welcomes applications from disabled students and/or those who have access requirements. The University will make every effort to provide reasonable adjustments to enable those with a disability, learning difficulty or access requirements to have the same opportunity as all other students to successfully complete their studies.

The University is committed to managing the application procedure and the programme itself to ensure that services are accessible for all students and that an inclusive environment is created. Students with a disability, or others who may need access arrangements to assist in taking examinations, should complete the relevant section of the application form, or contact the [Inclusive Practice Manager](#). A separate room or other arrangements may be considered.

Requests are considered by a University panel, whose purpose is to ensure that students with disabilities and/or specific access requirements are neither advantaged nor disadvantaged by such arrangements when compared with other students. These considerations remain separate from the academic selection processes.

For further information, see the [Inclusive Practice Policy](#).

Sources of funding and scholarships

Information about potential sources of funding and scholarships is updated annually and where available is included in the prospectus web pages.

For further information see [Funding your study](#)

Educational aims and learning outcomes of the programmes

The educational aims of these programmes are informed by the Computing Subject Benchmark Statement, the QAA Code of Practice, the National Qualifications Framework, the ACM-IEEE Curriculum Guidelines, and the Goldsmiths Teaching and Learning Strategy.

The **BSc and CertHE Computing and Information Systems** are aimed at students who wish to develop careers in information technology management. The programmes are intended to give students the skills to solve technical problems and to determine robust solutions to incomplete or ill-specified scenarios typical of business environments in IT terms. Graduates are well-equipped to perform information system functions for large scale organisations, and to bridge the gap of language and understanding between technical and non-technical management.

The **BSc and CertHE Creative Computing** are aimed at students who wish to develop the ability to solve technical problems and create original works in visual and sound media. BSc students will have the skills to become technically competent creative professionals and to undertake project management and creative development roles in public and private sector organisations. Students will also develop skills in research and apply those skills to a practical project in a creative area and the production of a related project report.

There is a natural progression of skills as students progress through these programmes. On successful completion of the CertHE a student will have reached the same stage as a degree student who has completed Level 4 and will have developed a range of fundamental mathematical and computing skills.

For those students studying for the BSc, the purpose of the Level 5 courses is to consolidate the topics of Level 4, especially those topics most needed in the analysis and design of software systems. Students will develop and demonstrate more knowledge and greater understanding as they progress through the programme. At this level, a student will begin to create substantial applications involving graphics and databases.

At Level 6, more specialist optional courses are offered, and students may select those in which they are particularly interested. The Project is the capstone of the degree, and students are expected to demonstrate and develop aspects of what they have learnt from the taught courses, in an extended piece of individual work.

Learning outcomes – BSc Computing and Information Systems

A. Knowledge and understanding

Successful students should be able to:

A1: demonstrate systematic and critical understanding of key issues underlying computers, software, the Internet, information systems, e-Commerce, databases and algorithms, including coherent and detailed knowledge from specialist options

A2: explain and demonstrate how theoretical models and abstractions underpin reasoning about computing systems

A3: develop and implement complex software systems that meet user requirements using high-level programming languages

A4: demonstrate a detailed knowledge of how computer networks work, appropriate to a range of contexts

A5: use discrete mathematics for practical problem-solving in computing

A6: demonstrate knowledge of object oriented programming approaches, and their value

A7: demonstrate a detailed knowledge of techniques and methods in eliciting user requirements and developing system specifications

A8: utilise e-Commerce concepts in analysing business scenarios

A9: demonstrate understanding of methods for decomposing large problems into solvable sub-problems

A10: explain and demonstrate the importance of evaluation in checking that an implemented computing system meets specifications and that it fulfils its intended purpose (verification and validation)

A11 demonstrate knowledge and understanding of the range of uses of computing systems in business environments and discuss methods of evaluating a system's effectiveness in a given context

A12: give an account of the various roles people undertake in the design and use of socio-technical systems

A13: discuss complex ethical, social and legal issues pertaining to contemporary and future computing systems

Teaching/learning methods and strategies for cognitive abilities

Students will be given the opportunity to acquire these abilities through the subject guides for the courses, the recommended textbooks, further reading and through formative assessments. For example, A1, A2, A4, A5, A7, A11 and A13 are addressed in the Level 4, 5 and 6 subject guides. They are reinforced by being a fundamental part of examples used in the guide, and in individual coursework.

Methods for assessing attainment of cognitive abilities

These abilities are assessed through a mixture of examinations, coursework assignments, and a substantial project in the final year. In particular, A1 is assessed directly by examinations in all three years and by very focused coursework in the first year; A2 is assessed by an examination in the first year and it also forms part of the assessment in coursework and examinations later in the programme; A4 is assessed by examination and coursework in the second year; A5 is called upon throughout the degree; A12 is assessed through various coursework and exams; A3, A9 and A11 are some of the principal criteria in assessing the final year project and on examinations and coursework in several programming and software development courses throughout the programme. Assessments for the final year project and, to a lesser extent for all coursework include criteria regarding original and critical thinking about a subject, understanding the implications of a problem specification, formulating and presenting a clear argument, interpreting material in one's own words, and proficiency at analysis and evaluation.

B. Intellectual and practical skills

Successful students should be able to:

B1: select and employ appropriate techniques to gather requirements from stakeholders

B2: write working programs to meet user requirements

B3: propose IT solutions for business problems and evaluate the fit of computing systems to business requirements

B4: model requirements and the systems they lead to in an appropriate modelling language

B5: develop software architectures of some complexity from user requirements and specifications

B6: test, correct and extend the functionality of existing programs

B7: explain concepts in distributed computing, resource allocation, and emerging technologies

B8: discuss and use classic algorithms to solve a range of standard problems, and develop algorithms to solve new problems

B9: apply a range of design techniques, principles for analysing algorithms and problems, and methods of proving correctness of algorithms

B10: break down complex problems and select and employ appropriate data structures and algorithms

B11: select and employ appropriate methods from the software development lifecycle, through requirements to implementation and testing

B12: carry out substantial independent work through an individual project

Teaching and learning methods for intellectual and practical skills

B1, B4, B5 and B11 are taught in subject guides and associated material in the Virtual Learning Environment, and in recommended further reading. The learning is reinforced by structured coursework and assessed in the examination. B3, B12 and B10 are most especially learnt in the final year project.

Assessment methods for intellectual and practical skills

A combination of unseen examinations, coursework assignments, and the final year project

C. Transferable skills

Successful students should be able to:

C1: determine the relevant information from disparate sources to identify and address complex issues

C2: demonstrate confidence in tackling complex problems in a systematic logical manner

C3: employ information and communications technologies effectively

C4: communicate ideas effectively using appropriate combinations of text, graphics, video, *etc.*

C5: reason logically and argue persuasively

C6: study and work independently

C7: manage their own learning and work to deadlines effectively

C8: undertake and manage sustained project work to completion

Teaching/learning methods and strategies for transferable skills

Although these abilities are assessed through coursework and examination, considerable benefit will be gained from independent learning undertaken. Much of the coursework, throughout the programme, is designed to build upon these abilities. In particular, students are expected to be able to use libraries and find material to support their coursework and to be able to write up their coursework in a comprehensible way using the English language and diagrams where appropriate.

Methods for assessing attainment of transferable skills

These abilities are assessed throughout the programme. All coursework involves C1 and C3; C1 is assessed directly in a first year course, and it is also, along with C4, part of the assessment of many coursework and the final year project.

Learning outcomes – CertHE Computing and Information Systems

A. Knowledge and understanding

Successful students should be able to:

A1: display basic knowledge and understanding of the fundamental topics underlying the use of computers, software networks, the Internet and information systems

A2: use discrete mathematics for practical problem-solving in computing

A3: understand object oriented programming approaches

A4: utilise e-Commerce concepts in analysing a business scenario

A5: understand how to implement a simple system corresponding to a limited requirement set

B. Intellectual and practical skills

Successful students should be able to:

B1: write a working program to meet specified user requirements for a simple system

B2: propose e-Commerce solutions for limited business problems

B3: test, correct and extend the functionality of an existing program of limited complexity and size

C. Transferable skills

Successful students should be able to:

C1: determine the relevant information in a specified context for a given problem

C2: solve straightforward problems in a systematic logical manner

C3: employ information and communications technologies effectively

C4: communicate ideas effectively using key methods

C5: reason logically and argue coherently for straightforward scenarios

C6: work independently on well-specified tasks

C7: manage time and work to deadlines on well-specified tasks

Learning outcomes – BSc Creative Computing

A. Knowledge and understanding

Successful students should be able to:

A1: demonstrate systematic and critical understanding of key issues underlying computers, software, the Internet, human perception, digital signal processing, sound and music, and creativity and image making, databases and algorithms, including coherent and detailed knowledge from specialist options

A2: explain and demonstrate how theoretical models and abstractions underpin reasoning about computing systems

A3: develop and implement a substantial digital art-work using high-level programming languages or interactive design tools

A4: evaluate and critique their own and other creative artefacts

A5: develop and implement complex software systems that meet user requirements using high-level programming languages

A6: use discrete and continuous mathematics for practical problem-solving in computing, and apply this to the creative computing paradigm

A7: demonstrate knowledge of object oriented programming approaches, and their value

A8: demonstrate a detailed knowledge of techniques and methods in eliciting user requirements and developing system specifications

A9: demonstrate understanding of methods for decomposing large problems into solvable sub-problems

A10: explain and demonstrate the importance of evaluation in checking that an implemented computing system meets specifications and that it fulfils its intended purpose (verification and validation)

A11: demonstrate knowledge and understanding of the range of uses of computing systems in creative contexts and discuss methods of evaluating a system's effectiveness in a given context

A12: give an account of the various roles people undertake in the design and use of socio-technical systems

A13: discuss complex ethical, social and legal issues pertaining to contemporary and future computing systems

Teaching/learning methods and strategies for cognitive abilities

Students will be given the opportunity to acquire these abilities through the course unit subject guide, the recommended textbook, further reading and through formative assessments. For example, A1, A2, A3 and A8 are addressed in the subject guides. They are then reinforced by being a fundamental part of examples used in the guide, and in individual course work in subsequent years. Acquisition of the remaining cognitive abilities

becomes an integral part of the study material, recommended reading and coursework in years two and three.

Methods for assessing attainment of cognitive abilities

These abilities are assessed through a mixture of examinations, coursework assignments, and a substantial project in the final year. In particular, A1 is assessed directly by examinations in all three years and by very focused coursework in the first year; A4 and A5 are assessed by coursework; A3, A4 and A10 are assessed in the final year project; A2, A6 and A8 are assessed through various coursework and exams. Assessments for the final year project and, to a lesser extent for all coursework, include criteria regarding original and critical thinking about a subject, understanding the implications of a problem specification, formulating and presenting a clear argument, interpreting material in one's own words, and proficiency at analysis and evaluation.

B. Intellectual and practical skills

Successful students should be able to:

B1: select and employ appropriate techniques to gather requirements from potential users

B2: model requirements and the systems they lead to in an appropriate modelling language

B3: develop software architectures of some complexity from user requirements and specifications

B4: test, correct and extend the functionality of existing programs, with particular focus on the creative domain

B5: create a substantial computer-based art-work and be able to critique its value

B6: discuss classic algorithms to solve certain common problems, and develop algorithms to solve new problems.

B7: apply general design techniques, principles for analysing algorithms and problems, and basic methods of proving correctness of algorithms.

B8: break down complex problems, with an emphasis on creative computing, and select and employ appropriate data structures and algorithms

B9: select and employ appropriate methods from the software development lifecycle, through requirements to implementation and testing

B10: turn a creative idea into a digital implementation

B11: carry out substantial independent work through an individual project

Teaching and learning methods for intellectual and practical skills

B1-B3 and B5 are taught in subject guides and associated material in the Virtual Learning Environment, and in recommended further reading. The learning is reinforced by structured coursework and assessed in the examination. B10 is developed in coursework. B10 and B11 are most especially learnt in the final year project.

Assessment methods for intellectual and practical skills

A combination of unseen examinations, coursework assignments (B1-B5), and the final year project (all).

C. Transferable skills

Successful students should be able to:

C1: determine the relevant information from disparate sources to identify and address complex issues

C2: demonstrate confidence in tackling complex problems in a systematic logical manner

C3: employ information and communications technologies effectively

C4: communicate ideas effectively using appropriate combinations of text, graphics, video, *etc.*

C5: reason logically and argue persuasively

C6: study and work independently

C7: manage their own learning and work to deadlines effectively

C8: undertake and manage sustained project work to completion

Teaching/learning methods and strategies for transferable skills

Although these abilities are assessed through coursework and examination, considerable benefit will be gained from independent learning undertaken. Much of the coursework, throughout the programme, is designed to build upon these abilities. In particular, students are expected to be able to use libraries and find material to support their coursework and to be able to write up their coursework in a comprehensible way using the English language and diagrams where appropriate.

Methods for assessing attainment of transferable skills:

These abilities are assessed throughout the programme. All coursework involves C1; C2 is assessed directly in all courses, and it is also, along with C4, part of the assessment of many coursework and the final year project. Development of C7 is evidenced by success in coursework and the project.

Learning outcomes - CertHE Creative Computing

A. Knowledge and understanding

Successful students should be able to:

A1: display basic knowledge and understanding of the fundamental topics underlying the use of computers, software, the Internet and multimedia processing

A2: understand basic principles of colour, sound and image (2D and 3D)

A3: use discrete and continuous mathematics for practical problem-solving in computing

A4: understand object oriented programming approaches

A5: understand how to implement a system corresponding to a straightforward user requirement set

B. Intellectual and practical skills

Successful students should be able to:

B1: write a working program to meet specified user requirements for a simple system

B2: test, correct and extend the functionality of an existing program of limited complexity and size

B3: develop a simple creative artefact and critique its value

C. Transferable skills

Successful students should be able to:

C1: determine the relevant information in a specified context for a given problem

C2: solve straightforward problems in a systematic logical manner

C3: employ information and communications technologies effectively

C4: communicate ideas effectively using key methods

C5: reason logically and argue coherently for straightforward scenarios

C6: work independently on well-specified tasks

C7: manage time and work to deadlines on well-specified tasks

Learning outcomes – CertHE Computing Studies (exit qualification)

A. Knowledge and understanding

Successful students should be able to:

A1: demonstrate engagement with an essential introduction to computing studies

A2: demonstrate an understanding of the concepts and principles related to key areas of study

A3: have obtained fundamental skills for employment and for further study

B. Intellectual and practical skills

Successful students should be able to:

B1: critically evaluate information and evidence to support conclusions and recommendations

B2: develop proficiency through practice and experiential learning

B3: break down problems and select and employ a limited range of methods to solve

C. Transferable skills

Successful students should be able to:

C1: determine relevant information in a specified context for a given problem

C2: solve straightforward problems in a systematic logical manner

C3: communicate ideas effectively using key methods

C4: work independently on well-specified tasks

C5: manage time and work to deadlines on well-specified tasks

Learning outcomes – Diploma in Computing Studies (exit qualification)

A. Knowledge and understanding

Successful students should be able to:

A1: demonstrate engagement with an essential introduction to computing studies

A2: demonstrate an understanding of the concepts and principles related to key areas of study

A3: demonstrate a broader understanding and further analytical and technical skills relating to the study of computing

A4: have obtained a range of knowledge and skills in computing to equip them for employment or further study

B. Intellectual and practical skills

Successful students should be able to:

B1: recognise and analyse criteria and specifications appropriate to specific problems and plan strategies for their solution

B2: critically evaluate information and evidence to support conclusions and recommendations

B3: develop increased proficiency through practice and experiential learning

B4: break down problems and select and employ a range of appropriate methods to solve

C. Transferable skills

Successful students should be able to:

C1: organise information and determine relevance in a structured way

C2: solve problems in a systematic logical manner

C3: communicate ideas effectively using a variety of methods

C4: reason logically and argue persuasively

C5: work independently

C6: manage time and work to deadlines effectively

Learning, teaching and assessment strategies

Students can use the resources in the Virtual Learning Environment (VLE) to study independently or as part of a support group formed in the VLE. Additionally, in some countries, students can also choose to pay for educational support at a local teaching centre to benefit from face-to-face tuition. A [Directory](#) of teaching centres recognised by the University of London for providing study support to students of the University of London is provided on the website. To take the CertHE, students must study at a teaching centre that is listed as recognised for this purpose.

Students will be provided with subject guides for each course studied. These specially produced study materials are developed by academics appointed by Goldsmiths to guide students through the textbooks. They may be supplemented by support materials such as interactive exercises, audio and animated graphics, and hyperlinked glossaries of key terms.

Past examination papers, as well as examiners' commentaries on past examinations providing generic feedback on assessment, are updated annually and are available to download. In addition, students receive a Programme Handbook on the [Student Portal](#) which gives both study advice and practical information such as: study techniques, planning studies, preparing for assessments, and contacts at the University.

The VLE forms an important part of the study experience. It includes electronic study materials, student discussion forums, and instructions on how to submit coursework assignments. The Programme Team is active on discussion boards throughout the year, and provides updates such as draft coursework commentaries, a selection of exemplary coursework assignments, etc. Interim grades for all coursework assignments are provided, together with the grade distribution indicating how well students have performed overall in the assignment. Detailed individual feedback is currently provided for coursework assignments in three courses.

Assessment criteria for the programme take into account the level at which these skills have been achieved.

Assessment methods

The assessment for most courses is by timed unseen written examination (held at established centres worldwide) and coursework. Students must satisfy the examiners in both elements of the assessment. The overall mark for a course where coursework is required will be a combination of the mark for the written examination and the mark for the coursework, weighted 80:20.

In order to pass a course which has coursework, students must:

- achieve an **average** mark of at least 35% for the coursework and
- a mark of at least 35% for the examination and
- the overall weighted average for the course must be at least 40%.

Where students do not achieve at least 35% in either coursework or examination, and their overall weighted average is 40% or above, they will receive a mark of 39% (Fail) for the course.

The assessment for the Project consists of a preliminary written report, a final written report and a written examination, weighted 10:65:25 respectively. A student must obtain an overall weighted average mark of 40% or above and pass both the final project report and examination with marks of 40% or above.

The written examinations take place on one occasion each year, normally commencing in May. They are held at established examination centres worldwide.

Full details of the dates of all examinations are available on the [website](#).

Individual courses

A student may choose whether or not to be formally assessed in the credit bearing individual courses for which they are registered. Students who choose to be formally assessed will be examined in the same way as students studying for a full qualification.

Student support and guidance

The following summarises the support and guidance available to students:

CertHE students will receive materials from the teaching centre at which they are registered. Registered BSc students will be provided with study materials by the University of London. Some of the materials and resources listed below can only be found online:

- [Student Portal](#): for accessing student induction, study skills support, careers and employability resources, student wellbeing advice.
- Student Guide: provides information which is common to all students and gives information about matters of importance from the start of a student's relationship with the University of London through to their graduation;
- The Virtual Learning Environment (VLE): gives access to materials (including subject guides and assignments);
- The VLE also includes a range of additional study resources such as:
 - Links to software that may be downloaded for a course;
 - Additional interactive exercises;
 - Online student café and discussion areas: allow students to communicate with each other and to provide mutual support. The Programme Team is active on the VLE and there is tutor presence on the course discussion pages;
 - Past examination papers and Examiners' commentaries: provide generic feedback on assessment;
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- Programme Handbook: tells students how to access available resources and information about assessment procedures.

- Subject guides: introduce the topics within the syllabus and should be used alongside the textbooks that are recommended. Text books are the main focus of a student's study and some may need to be bought while others may be accessed from a library;
- [Programme regulations](#).
- [The Online Library](#): provides a range of full-text, multidisciplinary databases where journal articles, book reviews and reports can be found.
- University of London library: gives registered students use of the resources located within the Senate House Library (for a small additional fee).
- A University of London email account and web area: permits personal information management.

Quality evaluation and enhancement

The University of London delivers the majority of its flexible and distance learning programmes through a collaboration between the University of London Worldwide and member institutions of the University of London. However some of the flexible and distance learning programmes draw solely on academic input from the University of London, and are delivered without academic lead by a member institutions. The policies, partnerships (where applicable) and quality assurance mechanisms applicable for the programmes are defined in the following key documents: The Quality Framework, the [Quality Assurance Schedules](#), [Guidelines for Examinations](#), [General Regulations](#) and, for each programme, [programme specific regulations](#).

Award standards

All University of London qualifications align with the [Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies](#) to assure appropriate standards for each qualification.

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Review and evaluation mechanisms

Procedures are in place to assure the standards of the award and the quality of the student experience, which include programme development, delivery, management, systematic monitoring and ongoing review and enhancement of all University of London programmes.

- Annual programme reports are produced for all programmes in order to review and enhance the provision and to plan ahead;
- Independent external examiners: submit reports every year to confirm that a programme has been assessed properly and meets the appropriate academic standards;

- Annual student information statistics: prepared and referenced for systematic reporting within the University of London;
- Periodic programme reviews: carried out every 4-6 years to review how a programme has developed over time and to make sure that it remains current and up-to-date.

Improvements are made as necessary to ensure that systems remain effective and rigorous.

Student feedback mechanisms

The principal channel for collecting feedback from students is the Student Experience Survey. Carried out every two years, this collects feedback from the student body on a range of topics relating to the student lifecycle. The results are analysed externally and then considered in a number of different ways, including by the Programme Team, principal committees and the senior leadership team. Details of any resulting actions taken are published on the Virtual Learning Environment and the Student Portal.

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There are also opportunities for students to get involved in governance. An undergraduate and postgraduate student member is appointed by the University to the majority of committees through an annual appointment round. Some programmes also recruit student members at the programme level. Students are frequently invited to take part in quality review processes such as Periodic Programme Reviews, Programme approval, Thematic Reviews, MOOC review panels and ad hoc focus groups. Opportunities such as these are advertised through social media and on the website. More information can be found on the [website](#).

Students can also apply to join the Student Voice Group, which meets four times a year to consider initiatives for enhancing student experience. Notes from these meetings are published on the Student Portal.

After graduation

Further study

Successful completion of the CertHE allows students to progress to the related BSc or another degree programme. Successful completion of the degree programme may serve as preparation for students who wish to go on to take further study in the subject area. This may be undertaken at Goldsmiths or elsewhere.

Graduates of the University of London who have been awarded a BSc Computing and Information Systems or a BSc Creative Computing are eligible for a 30% discount on taught Masters programmes at Goldsmiths, University of London. For further information, please see <https://www.gold.ac.uk/ug/fees-funding/scholarships>

Graduate employment routes

Graduates of the BSc Computing and Information Systems are well equipped to develop as technically competent IT managers and, beyond that, into managers within IT dependent organisations. Particularly relevant careers include systems analysis, systems design, applications programming, IT consultancy, project management and web development.

Graduates of the CertHE Computing and Information Systems will have the skills to undertake simple specification and implementation roles.

Graduates of the BSc Creative Computing degree will have developed an understanding of the core software tools, component media and technologies required for interactive media and the issues arising from their integration. They will have the knowledge, capability and skills to develop careers in the computing and cultural industries such as: web development, animation, computing in the cultural sector, systems analysis, systems management and IT consultancy.

Graduates of the CertHE Creative Computing will have the skills to undertake simple specification and implementation roles. In addition, they will have an understanding of issues in design and how computers can assist design.

The Alumni community

Upon finishing a course of study, graduates automatically become part of the University of London alumni community, a diverse global network of more than one million graduates in over 180 countries, providing lifelong links to the University and to each other.

Alumni are encouraged to keep in touch after they graduate and to become active members of the alumni community; in return they receive a number of benefits and services, including an extensive programme of events and engagement opportunities.

More information is available on the alumni [webpage](#).

Follow the alumni community on social media: [Facebook](#), [Instagram](#), [LinkedIn](#)



**UNIVERSITY
OF LONDON**

Programme Specification 2020–2021

Computing and
Information Systems
Creative Computing
(New Regulations)

BSc
CertHE
Diploma
Individual courses
and Work Experience Entry routes

Important document – please read



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Important information regarding this document

Last revised 26 August 2020

About this document

The Programme Specification gives a broad outline of the structure and content of the programme, the entry level qualifications, as well as the learning outcomes students will achieve as they progress. Some of the information referred to in this programme specification is included in more detail on the University of London website. Where this is the case, links to the relevant webpage are included.

Where links to external organisations are provided, the University of London is not responsible for their content and does not recommend nor necessarily agree with opinions expressed and services provided at those sites.

If you have a query about any of the programme information provided, whether here or on the website, registered students should use the *Ask a question* button in the [student portal](#); otherwise the *Contact Us* button on each webpage should be used.

Terminology

The following language is specific to the Computing programmes:

Course: Individual units of the programme are called courses. Each course is a self-contained, formally structured learning experience with a coherent and explicit set of learning outcomes and assessment criteria.

Key revisions made

Programme specifications are revised annually. The quality committee of Goldsmiths, University of London, as part of its annual review of standards, confirms the programme structure and the educational aims and learning outcomes, and advises on any development in student support.

Where changes have been made which may impact on continuing students, these are listed below. For all new students, the programme and general information provided in this document is correct and will be applicable for the current year.

Significant changes made to the Programme Specification 2020-2021:

No significant changes.

The relationship between the BSc, the CertHE, and the Work Experience Entry Route

The Work Experience Entry Route (WEER) is not a qualification or an award. It is an entry route that provides access for students who do not fulfil the stated entry requirements for the degree. The WEER is not an entry route to the CertHE.

The BSc and the CertHE are awards or qualifications, obtained after fulfilling the requirements stated in the Programme [Regulations](#).

The CertHE is a qualification in its own right and an alternative entry route to the BSc. A student who does not fulfil the stated entry requirements for the degree may be able to study towards the CertHE. Once the student has completed all of the requirements for the CertHE to be awarded, they may progress to the degree. In this case, unlike the WEER, a CertHE is awarded as well.

In summary

The BSc and the CertHE are awards; the WEER and the CertHE are entry routes to the BSc.

Work Experience Entry Route 2020-2021

The WEER provides an opportunity for those who may not satisfy the University's entrance requirements for the BSc Computing and Information Systems or the BSc Creative Computing to gain access to these degrees.

The WEER comprises two full courses. The assessment of each course is a combination of an unseen written examination and coursework.

Level of the Work Experience Entry Route

The WEER are placed at the following level of the Framework for Higher Education Qualifications (FHEQ):

- Level 4

The Framework for Higher Education Qualifications in England, Wales and Northern Ireland (FHEQ) forms part of the UK Quality Code for Higher Education of the [Quality Assurance Agency for Higher Education](#) (QAA).

Body certifying the Work Experience Entry Route

University of London

Registering body

University of London

www.london.ac.uk

Academic direction

Goldsmiths, University of London

Language of study and assessment

English

Mode of study

Independent or locally supported learning

Work Experience Entry Route structures

The WEER related to the BSc Computing and Information Systems comprises two 30 credit courses as follows:

- CO1108 Information systems: foundations of e-business
- CO1109 Introduction to Java and object oriented programming

The WEER related to the BSc Creative Computing comprises two 30 credit courses as follows:

- CO1109 Introduction to Java and object-oriented programming
- CO1112 Creative computing I: image, sound and motion

Maximum and minimum periods of registration

The maximum and minimum period of registration, from a student's effective date of registration, are:

	Minimum	Maximum
Work Experience Entry Route	1 year	3 years

Study materials are made available after registration and on payment of the applicable fee.

Credit value of courses

Further information about the credit systems used by universities in the UK and Europe is provided by the [Quality Assurance Agency](#) and the [European Credit Transfer and Accumulation System](#).

Where credits are assigned to each course of a programme, credit indicates the amount of learning carried out in terms of the notional number of study hours needed, and a specified FHEQ credit level indicates the depth, complexity and intellectual demand of learning involved. One UK credit equates to a notional ten hours of study. The details below indicate the UK credits and the European Credit Transfer and Accumulation System (ECTS) values.

For the WEER related to the Computing and Information Systems and Creative Computing, credits are assigned to the courses as follows:

- 30 UK credits or 15 ECTS credits for each course.

All courses have been designated FHEQ Level 4.

Progression and credit

A student who has successfully completed the WEER by passing the relevant two full courses will be deemed to have satisfied the entrance requirements for the BSc Computing

and Information Systems or the BSc Creative Computing and may progress to the degree by applying to transfer their registration.

The WEER does not give automatic access to any other award of the University.

Students who transfer to the BSc Computing and Information Systems or the BSc Creative Computing will be credited with those courses passed as part of the WEER.

Recognition of prior learning

Prior learning will not be recognised or accredited for the WEER.

Entrance requirements

Applicants must submit an application in line with the procedures and deadlines set out on the [website](#).

Details of the WEER entrance requirements are given on the programme pages, under the Requirements section:

[Computing and Information Systems](#)

[Creative Computing](#)

English language requirements

Applicants must satisfy the English language requirements for the programme.

Additional information on English language proficiency tests is given on the [website](#).

Where an applicant does not meet the prescribed English language proficiency requirements but believes that they can demonstrate the requisite proficiency for admission the University may, at its discretion, consider the application.

English language requirements are given on the programme page, under the Requirements section:

[Computing and Information Systems](#)

[Creative Computing](#)

Internet access

Students must have regular access to a computer (or mobile device*) with an internet connection to use the University of London website and the Student Portal. These are where many of the programmes' study resources are located. A webcam may be required in the event that online timed assessments (if offered) are proctored, and in such a case, it is a student's responsibility to ensure that they have a webcam.

** Full mobile access to VLE resources is not available for all programmes.*

Computer requirements

Whether studying on their own or at a teaching centre, students will need access to the following equipment and software.

Hardware

The recommended minimum configuration is as follows:

- Processor: 2GHz
- Hard drive: 10GB – free
- Screen resolution: 1024 x 768 colour
- Networking: Network adapter – Ethernet, Fast Ethernet, Gigabit Ethernet
- RAM: 2GB
- Audio output Soundcard: stereo
- Sound card and speakers are also recommended for playing audio materials.
- Other machines, apart from those that are PC-compatible, are acceptable provided they run equivalent software.

Software

Students are advised to make use of common operating systems and software, as follows:

- Windows™ or Linux or Macintosh.
- Word processor, spreadsheet and database. No applications are recommended specifically, but under Windows™, an integrated package such as Microsoft Office is sufficient, while under Linux, OpenOffice is adequate.
- The Java SE Development Kit (JDK) version 6 or higher, available for free from oracle.com.

Students with access requirements

The University of London welcomes applications from disabled students and/or those who have access requirements. The University will make every effort to provide reasonable adjustments to enable those with a disability, learning difficulty or access requirements to have the same opportunity as all other students to successfully complete their studies.

The University is committed to managing the application procedure and the programme itself to ensure that services are accessible for all students and that an inclusive environment is created. Students with a disability, or others who may need access arrangements to assist in taking examinations, should complete the relevant section of the application form, or contact the Inclusive Practice Manager. A separate room or other arrangements may be considered.

Requests are considered by a University panel, whose purpose is to ensure that students with disabilities and/or specific access requirements are neither advantaged nor disadvantaged by such arrangements when compared with other students. These considerations remain separate from the academic selection processes.

Sources of funding and scholarships

Information about potential sources of funding and scholarships is updated annually and where available is included in the prospectus web pages.

For further information see [Funding your study](#) .

Educational aims and learning outcomes of the programmes

The educational aims of these programmes are informed by the Computing Subject Benchmark Statement, the QAA Code of Practice, the National Qualifications Framework, the ACM-IEEE Curriculum Guidelines, and the Goldsmiths Teaching and Learning Strategy.

The **BSc Computing and Information Systems** is aimed at students who wish to develop careers in information technology management. The programme is intended to give students the skills to solve technical problems and to determine robust solutions to incomplete or ill-specified scenarios typical of business environments in IT terms. Graduates are well-equipped to perform information system functions for large scale organisations and to bridge the gap of language and understanding between technical and non-technical management.

Graduates of the BSc Computing and Information Systems are well equipped to develop as technically competent IT managers and, beyond that, into managers within IT dependent organisations. Particularly relevant careers include systems analysis, systems design, applications programming, IT consultancy, project management and web development. In addition to these vocational benefits, successful completion of the BSc also prepares graduates for a wide range of postgraduate degrees computing and related areas.

The **BSc Creative Computing** is aimed at students who wish to develop the ability to solve technical problems and also to create original works in visual and sound media.

BSc students will have the skills to become technically competent creative professionals and to undertake project management and creative development roles in public and private sector organisations. Students will also develop skills in research and apply those skills to a practical project in a creative area and the production of a related project report.

Graduates of the BSc Creative Computing will have developed an understanding of the core software tools, component media and technologies required for interactive media and the issues arising from their integration. They will have the knowledge, capability and skills to develop careers in the computing and cultural industries such as: web development, animation, computing in the cultural sector, systems analysis, systems management and IT consultancy. Successful completion of the BSc also prepares students for a wide range of postgraduate degrees, including specialisms, such as Computer Games.

For those students studying for the BSc, the purpose of the Level 5 courses is to consolidate the topics of Level 4, especially those topics most needed in the analysis and design of software systems. Students will develop and demonstrate more knowledge and greater understanding as they progress through the programme. At this level, a student will begin to create substantial applications involving graphics and databases. At Level 6, more specialist optional courses are offered, and students may select those in which they are particularly interested. The Project is the capstone of the degree, and students are expected to demonstrate and develop aspects of what they have learnt from the taught courses, in an extended piece of individual work.

Learning outcomes - Work Experience Entry Route related to the BSc Computing and Information Systems

Students successfully completing the WEER in Computing and Information Systems should:

- demonstrate an understanding of essential concepts and principles related to information systems and programming in Java;
- be able to communicate ideas and findings in a reliable and structured way; and
- have obtained knowledge and skills to equip them for entry to the BSc Computing and Information Systems.

Learning outcomes - Work Experience Entry Route related to the BSc Creative Computing

Students successfully completing the WEER in Creative Computing should:

- demonstrate an understanding of essential concepts and principles related to creative computing for image, sound and motion and programming in Java;
- be able to communicate ideas and findings in a reliable and structured way; and
- have obtained knowledge and skills to equip them for entry to the BSc Creative Computing.

Learning, teaching and assessment strategies

Students can use the resources in the Virtual Learning Environment (VLE) to study independently or as part of a support group formed in the VLE. Additionally, in some countries, students can also choose to pay for educational support at a local teaching centre. A [Directory](#) of teaching centres recognised by the University of London for providing study support to students of the University of London is provided on the website.

Students will be provided with subject guides for each course studied. These specially produced study materials are developed by academics appointed by Goldsmiths to guide students through the textbooks; they may be supplemented by support materials such as interactive exercises, audio and animated graphics, and hyperlinked glossaries of key terms.

Past examination papers, as well as examiners' commentaries on past examinations providing generic feedback on assessment, are updated annually and are available to download. In addition, students receive a [Programme Handbook](#) which gives both study advice and practical information such as: study techniques, planning studies, preparing for examinations, and contacts at the University.

The VLE forms an important part of the study experience. It includes electronic study materials, student discussion forums, and instructions on how to submit coursework assignments. The Programme Team is active on discussion boards throughout the year, and provide updates such as draft coursework commentaries, a selection of exemplary coursework assignments, etc. Interim grades for all coursework assignments are provided, together with the grade distribution indicating how well students have performed overall in the assignment. Detailed individual feedback is currently provided for coursework assignments on one course for the WEER (CIS) and one course for the WEER (CC).

Assessment criteria for the programme take into account the level at which these skills have been achieved.

Assessment methods

The assessment for courses of the WEER is by unseen written examination (held at established centres worldwide) and coursework. Students must satisfy the examiners in both elements of the assessment. The overall mark for a course will be a combination of the mark for the written examination and the mark for the coursework, weighted 80:20.

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