

Programme Specification (Undergraduate)

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FOR ENTRY YEAR: 2022/23

Programme title(s) and code(s):

BSc Creative Computing (G452)

BSc Creative Computing with a Year in Industry (G452)

BSc Creative Computing with a Year Abroad (G452)

CertHE Creative Computing*

DipHE Creative Computing*

Notes

a) HECOS Code

HECOS Code	%
100368	100

b) UCAS Code (where required)

G452

2. Awarding body or institution:

University of Leicester

3. a) Mode of study

Full-time

b) Type of study

Campus-based

4. Registration periods:

BSc Creative Computing

The normal period of registration is 3 years

The maximum period of registration 5 years

BSc Creative Computing with a Year in Industry / Year Abroad

The normal period of registration is 4 years

The maximum period of registration 6 years

5. Typical entry requirements

A-levels: BBB

Two AS-levels considered in place of one A-level. General Studies accepted.

BTEC: DDM

^{*} An award marked with an asterisk is only available as an exit award and is not available for students to register onto.

No specific subjects at A-level or BTEC are required, but it is expected that students will have a mix of "arts" and "sciences" qualifications. Where there is a uniform qualifications profile (i.e. all sciences or all arts), the personal statement will be examined for evidence of sustained and credible activity in the under-represented side. This should include evidence of computing, programming or web skills, creative or artistic ability.

6. Accreditation of Prior Learning

APL will not be accepted for exemptions from individual modules, however may be considered for direct entry to year 2, on a case by case basis and subject to the general provisions of the University APL policy.

7. Programme aims

The BSc Creative Computing programme aims to allow students to:

- understand the ways in which creativity and enterprise are shaping digital technologies;
- place creative thinking at the heart of technological developments;
- improve computer technologies to support human creativity;
- experience an intellectually challenging and stimulating curriculum that draws on the research expertise of staff in the department and associated enterprise partners;
- develop the flexibility and adaptability necessary to respond effectively in a dynamic world;
- develop an appetite and ability to be an independent entrepreneur and life-long learner;
- apply creative computing skills within different discipline areas;
- have confidence and expertise in the interconnected areas of computing, creativity and business;
- be able to solve problems by applying a rigorous yet creative approach;
- develop the foresight and prescience to anticipate new technological developments and their impact;
- acquire team working and presentation skills.

It will equip students to:

- create original software applications and projects both individually and in collaboration;
- understand the design process and its potential applications;
- flourish in the rapidly changing digital economy;
- work across disciplines and in different contexts;
- solve real-world problems in a creative way;
- develop in-depth knowledge and understanding of specialised areas of creative computing;
- be technically competent in relevant areas of the arts and humanities;
- understand the theory and concepts that underpin creativity and computing;
- embrace the wider social and cultural context for creative computing; and
- undertake research and development in both academic and professional situations.

In addition, for the "with a Year in Industry" variants:

 provide students with an experience of the application of creative computing and professional skills in an industrial environment and to reinforce knowledge through its use in different environments.

In addition, for the "Year Abroad" variants:

- enable students to gain experience of Creative Computing in an international perspective;
- develop students' working knowledge of a language other than English; and
- provide students with an environment that will encourage a thoughtful and mature approach to all aspects of study and life, creating graduates with broad experiences and horizons.

8. Reference points used to inform the programme specification

- QAA Benchmarking Statement <u>Art and Design (2016)</u>
- QAA Benchmarking Statement <u>Business and Management (2015)</u>
- QAA Benchmarking Statement <u>Computing (2016)</u>
- IEEE and ACM Joint Task Force <u>Computer Science Curricula</u> (2013)
- University of Leicester Discovery Led and Discovery Enabling Learning Strategy 2016-2020
- University of Leicester Periodic Developmental Review Report

9. Programme Outcomes

Unless otherwise stated, programme outcomes apply to all awards specified in 1. Programme title(s).

a) Discipline specific knowledge and competencies

i) Mastery of an appropriate body of knowledge

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Recall and describe key issues in creative computing.	Demonstrations. Essay. Feedback. GIS. Laboratories. Lectures. Presentations. Projects. Seminars. Study groups. Tutorials. Workshops.	Annotated learning log. Blog post. Computer-based test. Concept map. Coursework. Demonstration. Essay. Essay plan. Exam. Field report. Instant reports (using a template). Literature review. Portfolio. Presentation. Reflective journal. Report.
Define creative problems that may be solved with appropriate knowledge of computing.	Computer-based practicals. Coursework. Feedback. GIS. Laboratories. Projects. Seminars. Study groups. Tutorials. Workshops.	Annotated learning logs. Business plan. Concept maps. Coursework. Demonstrations. Essays. Essay plans. Exams. Installations. Performances. Portfolios. Presentations. Products. Project works. Reflective journals. Role play.
Explain the role that creative computing plays in the success of modern business and research projects.	Demonstrations. Essays. Feedback. Field trips. GIS. Lectures. Presentations. Seminars. Study groups. Tutorials. Workshops.	Annotated learning logs. Blog posts. Business plan. Computer-based tests. Coursework. CV. Demonstrations. Essays. Essay plans. Exams. Field reports. Instant reports (using a template). Literature reviews. Portfolios. Presentations. Products. Project works. Reflective journals. Reports.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
With-industry: apply skills and knowledge from their degree within a professional context	Placement preparation and supervision.	Placement assessment and visit report.
Year abroad: demonstrate understanding of the core of an appropriate foreign language	Lectures, language laboratories and learning abroad.	University report.

ii) Understanding and application of key concepts and techniques

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Explain and apply knowledge of key creative computing techniques to solve realworld problems.	Computer-based practicals. Coursework. Demonstrations. Feedback. GIS. Laboratories. Lectures. Presentations. Projects. Seminars. Study groups. Tutorials. Web-based learning materials. Workshops.	Annotated learning logs. Blog posts. Business plan. Computer-based tests. Concept maps. Coursework. Demonstrations. Essays. Essay plans. Exams. Field reports. Installations. Literature reviews. Portfolios. Presentations. Products. Project works. Reflective journals. Reports. Role play.
Apply creative thinking to specify, design, implement and test creative computing applications.	Coursework. Demonstrations. Feedback. GIS. Laboratories. Presentations. Projects. Seminars. Study groups. Tutorials. Workshops.	Annotated learning logs. Concept maps. Coursework. Demonstrations. Installations. Instant reports (using a template). Performances. Portfolios. Presentations. Products. Project works. Reflective journals. Reports.
Explain and apply suitable design processes and methodologies, to determine strategies for innovation in creative computing.	As above	As above
Apply tools and techniques to efficiently collaborate with others to plan and execute a project	As above	As above
Year abroad: Demonstrate an ability to communicate some aspects of Creative Computing in a foreign language	Lectures and language laboratories	University report.

iii) Critical analysis of key issues

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Analyse client/customer problems, requirements and criteria, and hence plan an appropriate yet innovative solution strategy.	Coursework. Feedback. GIS. Laboratories. Lectures. Presentations. Projects. Seminars. Study groups. Tutorials. Workshops.	Annotated learning logs. Business plan. Coursework. Demonstrations. Literature reviews. Portfolios. Presentations. Project works.
Critically <i>analyse</i> aesthetic, commercial, sociocultural, legal and ethical issues in creative computing.	As above	Computer-based tests. Essays. Essay plans. Exams. Field reports. Literature reviews. Presentations. Project works. Reports.
Evaluate accurately creative computing systems, processes and products.	As above	As above

iv) Clear and concise presentation of material

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Present information in a variety of forms, chosen to maximise reader/audience impact and understanding, such as reports, dissertations, seminars, posters, websites, games, blogs, podcasts, exhibitions, performances, videos and other current media technologies.	Coursework. Demonstrations. Feedback. GIS. Lectures. Presentations. Projects. Seminars. Study groups. Tutorials. Workshops.	Blog posts. Concept maps. Coursework. Creative Writing. Demonstrations. Field reports. Installations. Instant reports (using a template). Performances. Portfolios. Presentations. Products. Project works. Reports.
With Industry: summarise key responsibilities and achievements from their placement	Placement Preparation and supervision	Placement assessment and visit report

v) Critical appraisal of evidence with appropriate insight

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Perform practical testing, technical analysis and critical evaluation of design ideas in laboratory or through simulation.	Computer-based practicals. Coursework. Demonstrations. Feedback. GIS. Laboratories. Projects. Tutorials. Workshops.	Computer-based tests. Coursework. Demonstrations. Essays. Essay plans. Exams. Instant reports (using a template). Literature reviews. Presentations. Products. Project works. Reports.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Create and design new processes or products to fulfil a specified requirement through synthesis of ideas from a wide range of sources.	As above.	As above.
Take account of industrial and commercial constraints when <i>applying</i> creative computing techniques.	As above.	As above.
With Industry: Critically evaluate their impact within a workplace environment and articulate achievements and skill development.	Placement preparation and supervision	Placement assessment and visit report

vi) Other discipline specific competencies

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Describe the purpose and benefits of different approaches to creative computing.	Feedback. GIS. Lectures. Presentations. Projects. Seminars. Study groups. Tutorials. Workshops.	Blog posts. Coursework. Essays. Exams. Field reports. Literature reviews. Presentations. Project works. Reports.
List and compare software tools for analysing and visualising data.	Lectures, Computer laboratories, Group Project work, Independent project work, GIS, Feedback, Project supervision.	As above

b) Transferable skills

i) Oral communication

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Respond to technical questions with accurate and concise answers. BSc only.	Demonstrations. Feedback. GIS. Laboratories. Lectures. Presentations. Projects. Seminars. Study groups. Tutorials. Workshops.	Demonstrations. Presentations. Project works. Role play.
Demonstrate fluent and sustained scientific, technical and business communication. BA only.	As above	As above

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
With Industry: verbally promote professional aspects of themselves in a variety of situations including application and selection processes and networking opportunities.	Placement preparation and supervision	Placement assessment and visit report
Year abroad: Demonstrate core oral communication skills in a foreign language	Lectures and language laboratories.	University report.

ii) Written communication

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Write concise and accurate summaries of creative, computing and scientific knowledge, and solutions to problems, in a variety of different formats. BA only.	Essays. Feedback. Lectures. GIS. Seminars. Tutorials. Web-based learning materials.	Annotated learning logs. Blog posts. Business plan. Creative Writing. Essays. Essay plans. Exams. Field reports. Instant reports (using a template). Literature reviews. Reflective journals. Reports.
Produce properly structured, clear, advanced technical reports. BSc only.	As above	Annotated learning logs. Blog posts. Business plan. Field reports. Instant reports (using a template). Literature reviews. Reflective journals. Reports.
With Industry: promote professional aspects of themselves through written communication.	Placement preparation and supervision	Placement assessment and visit report
Year abroad: Demonstrate core written communication skills in a foreign language.	Lectures, tutorials, language laboratories	University report

iii) Information technology

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Compare between a broad range of software and IT tools, and choose these appropriately.	Computer-based practicals. Coursework. Demonstrations. Feedback. GIS. Laboratories. Lectures. Projects. Seminars. Study groups. Tutorials. Workshops.	Computer-based tests. Coursework. Demonstrations. Instant reports (using a template). Literature reviews. Portfolios. Presentations. Products. Project works. Reports.
Understand and articulate the limitations of Information Technology, especially in creative situations. BA only	Coursework. Demonstrations. Feedback. Field trips. GIS. Laboratories. Presentations. Projects. Seminars. Study groups. Tutorials. Workshops.	Annotated learning logs. Blog posts. Business plan. Coursework. Demonstrations. Exams. Field reports. Instant reports (using a template). Literature reviews. Portfolios. Presentations. Products. Project works. Reflective journals. Reports.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Explain the rules and principles that relate to computation and data processing. BSc only.	Coursework. Demonstrations. Feedback. GIS. Laboratories. Lectures. Presentations. Projects. Seminars. Study groups. Tutorials. Workshops.	Business plan. Coursework. Demonstrations. Essays. Essay plans. Exams. Instant reports (using a template). Literature reviews. Presentations. Project works. Reflective journals. Reports.

iv) Numeracy

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Use of a wide range of analytical and graphical methods	Computer-based practicals. Coursework. Feedback. GIS. Laboratories. Lectures. Projects. Seminars. Study groups. Tutorials. Workshops.	Annotated learning logs. Computer- based tests. Coursework. Exams. Instant reports (using a template). Portfolios. Presentations. Products. Project works. Reports.
Manipulate and present data in alternative formats to create deeper understanding or greater impact.	As above	As above

v) Team working

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Work effectively as part of a team, organise roles and manage time, undertake assigned tasks, and ensure completion of a team project. Identify strengths and weaknesses of team members.	Coursework. Feedback. GIS. Laboratories. Lectures. Projects. Seminars. Study groups. Tutorials. Workshops.	Annotated learning logs. Business plan. Coursework. CV. Demonstrations. Performances. Portfolios. Presentations. Project works. Reflective journals. Role play.
With Industry: collaborate with team members in a professional environment working.	Placement preparation and supervision	Placement assessment and visit report

vi) Problem solving

Intended Learning	Teaching and Learning Methods	How Demonstrated?
Outcomes		
Solve a variety of small and large problems through the integration of knowledge of creativity, computing and business.	Computer-based practicals. Coursework. Demonstrations. Feedback. GIS. Lectures. Presentations. Projects. Seminars. Tutorials. Workshops.	Annotated learning logs. Business plan. Concept maps. Coursework. Demonstrations. Exams. Installations. Instant reports (using a template). Performances. Portfolios. Presentations. Products. Project works. Reports.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Describe a systematic approach to analysing and solving creative problems and apply these to new problems.	As above	As above
With Industry: Describe the benefits of a proactive strategy to searching for career opportunities and apply this to finding a placement.	Placement preparation	Placement assessment and visit report

vii) Information handling

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Demonstrate a broad understanding of problems and issues that arise in creative computing.	Coursework. Feedback. Field trips. GIS. Laboratories. Lectures. Projects. Seminars. Study groups. Tutorials. Workshops.	Annotated learning logs. Blog posts. Coursework. Essays. Exams. Field reports. Literature reviews. Portfolios. Presentations. Project works. Reflective journals. Reports.
Conduct significant background research and literature surveys, and summarise content from information sources.	Coursework. Essays. Field trips. GIS. Lectures. Projects. Seminars. Study groups. Tutorials. Web-based learning materials.	Blog posts. Coursework. Demonstrations. Essays. Essay plans. Literature reviews. Project works. Reports.
Gather and <i>evaluate</i> information to independently gain new knowledge.	GIS, Project Supervision, Feedback	Individual and group project reports.

viii) Skills for lifelong learning

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Demonstrate knowledge and understanding of professional and ethical issues, and aspects of the law, in the context of creative computing.	Computer-based practicals. Coursework. Demonstrations. Essays. Feedback. Field trips. GIS. Lectures. Presentations. Projects. Seminars. Study groups. Tutorials. Workshops.	Coursework. Essays. Exams. Field reports. Reflective journals. Reports. Role play.
Demonstrate independence and time management skills.	Coursework. Feedback. GIS. Projects. Workshops.	Business plan. Coursework. CV. Project works. Psychometric tests. Reflective journals. Reports. Role play.
Engage in extra and co- curricular activities to develop career-relates skills.	Coursework. Feedback. Field trips. GIS. Projects. Web-based learning materials. Workshops.	Blog posts. Business plan. Coursework. Creative Writing. CV. Field reports. Portfolios. Project works. Psychometric tests. Reflective journals. Reports. Role play.

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
With Industry: Recognise their existing strengths and skills and articulate their value.	Placement preparation and supervision	Placement assessment and visit report

10. Progression points

This programme follows the standard scheme of award and classification set out in Senate Regulation 5 modified as follows:

a) Course transfers

n/a

b) Year Abroad

The Year Abroad variant of this programme is offered in accordance with the University's <u>standard</u> <u>specification for year abroad programme variants.</u>

c) Year in Industry

The Year in Industry variant of this programme is offered in accordance with the University's standard specification for year in industry programme variants.

11. Criteria for award and classification

This programme follows the standard scheme of undergraduate award and classification set out in <u>Senate Regulations</u> – see the version of <u>Senate Regulation 5 governing undergraduate programmes</u> relevant to the year of entry.

12. Special features

While this programme provides the skills and knowledge required to work within the creative industries or research, it provides a foundational knowledge of creativity, computing and business that will allow students to graduate into a wide range of roles.

Assessment items include: coursework, such as designs, models, software, reports, interviews, presentations, websites, seminars; portfolios, including installations, websites, performances, artworks, software, games, etc.; instant reports, written quickly using a template; team essays, cowritten by the group; concept maps; blog posts; reflective journals; business plans; literature reviews; role play; and products, alongside more familiar traditional types of assessment.

13. Indications of programme quality

- The programme will be subject to standard University of Leicester procedures for quality
 assessment, including Annual Developmental Review, Periodic Developmental Review, Quality
 Office review, liaison with College Academic Committee, and the programme will report to the
 departments' Learning and Teaching Committees.
- An External Examiner will be appointed according to Senate regulations 7.18-7.60.
- There will be systematic, regular evaluation by students registered with the programme, including anonymous evaluation of sessions and modules. Representatives from this programme will be appointed to the Student Staff Committee meetings within the Informatics department.
- The programme's teaching staff will engage with University procedures for peer assessment of teaching and marking.

a. External Examiner(s) reports

The details of the External Examiner(s) for this programme and the most recent External Examiners' reports for this programme can be found at exam-papers [log-in required]



Programme Specification (Undergraduate)

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Appendix 1: Programme structure (programme regulations)

The University regularly reviews its programmes and modules to ensure that they reflect the current status of the discipline and offer the best learning experience to students. On occasion, it may be necessary to alter particular aspects of a course or module.

FOR ENTRY YEAR: 2022/23

BSc Creative Computing

Level 4/Year 1 2022/23

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	60 credits	45 credits
Optional	n/a	n/a	15 credits

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	CO1101	Computing Fundamentals	15 credits
Sem 1	CO1102	Programming Fundamentals	15 credits
Sem 1	CO1110	Digital Arts Lab	15 credits
Sem 1	CO1111	Creativity and Computing	15 credits
Sem 2	CO1109	Business and Financial Computing	15 credits
Sem 2	CO1112	Games and Gamification	15 credits
Sem 2	CO1113	Ideation and Design	15 credits

Notes

N/A

Option modules

Delivery period	Code	Title	Credits
Semester 2	MN1024	Managing Digital Technologies	15 credits
Semester 2	CO1105	Introduction to Object-Oriented Programming	15 credits

Notes

This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

Level 5/Year 2 2023/24

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	n/a	45 credits	45 credits
Optional	n/a	15 credits	15 credits

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Sem 1	CO2102	Databases and Domain Modelling	15 credits
Sem 1	CO2109	SciArt & Big Data Visualisation	15 credits
Sem 1	CO2111	Developmental Computing	15 credits
Sem 2	CO2108	Concurrent Design	15 credits
Sem 2	CO2113	Entertainment Tech & Design	15 credits
Sem 2	CO2114	Foundations of Artificial Intelligence	15 credits

Notes

N/A

Option modules

Delivery period	Code	Title	Credits
Semester 1	EN2070	Using Stories	15 credits
Semester 1	MS2018	Digital Storytelling	15 credits
Semester 1	PS2113	Introduction to Sensation, Perception and Cognition for Creative Computing	15 credits
Semester 2	CO2104	User Interface Design and Evaluation	15 credits
Semester 2	MN2133	Equality, Diversity and Inclusion in Organisations	15 credits
Semester 2	MS2005	Working in the Creative Industries	15 credits

Notes

Choose one option from each semester.

This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

Level 6/Year 3 2024/25

Credit breakdown

Status	Year long	Semester 1	Semester 2
Core	45 credits	30 credits	15 credits
Optional	n/a	15 credits	15 credits

120 credits in total

Core modules

Delivery period	Code	Title	Credits
Year long	CO3202	Entrepreneurial Project	45 credits

Delivery period	Code	Title	Credits
Sem 1	CO3101	Computers, Society and Professionalism	15 credits
Sem 1	CO3104	Computational Creativity	15 credits
Sem 2	CO3107	Emerging Technologies	15 credits

Notes

N/A

Option modules

Delivery period	Code	Title	Credits
Semester 1	CO3102	Mobile and Web Applications	15 credits
Semester 1	NT3100	Sustainability Enterprise Project	15 credits
Semester 2	CO3103	Technology Management	15 credits
Semester 2	CO3110	Independent Study	15 credits

Notes

NT3100 can only be chosen through Online Module Selection. Students cannot choose it after OLMS has closed.

This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

BSc CREATIVE COMPUTING WITH A YEAR ABROAD

First and Second Year Modules

As for the first- and second-year of the BSc degree in Creative Computing.

Third Year Modules

The third year will be spent abroad taking approved courses either in an institution associated with the School of Computing and Mathematical Sciences via an ERASMUS bilateral agreement or in a university that has a Study Abroad exchange partnership agreement with the University of Leicester. Students will normally be required to complete the year and to reach a pass level of

attainment in 60 credits of Computer Science modules. Failure to do so will result in the student reverting to the three year BSc Creative Computing degree. The marks awarded during the year abroad do not contribute to the final degree classification.

Note: Transfer will be confirmed only after successful completion of the first year.

Fourth Year Modules

As for the third-year of the BSc degree in Creative Computing.

BSc CREATIVE COMPUTING WITH A YEAR IN INDUSTRY

First and Second Year Modules

As for the first- and second-year of the BSc degree in Creative Computing.

Third Year Modules

- 1. Students will work within a sponsoring company for one year between 1 July of the second year of the course and the start of the following year.
- 2. During their one-year placement students will undertake a programme of training and work experience which will be agreed by the sponsoring company and the University.
- 3. Students will be expected to keep a logbook recording their training and experience that is to be presented for approval to the sponsoring company and the University.
- 4. Students will be issued with a *Certificate of Industrial Studies* indicating successful completion of their placement.

 Students who do not satisfactorily complete their industrial placement will be transferred to the B.Sc. Creative Computing degree.

The Year in Industry does not contribute to the final degree classification.

Fourth Year Modules

As for the third-year of the BSc degree in Creative Computing.

Appendix 2: Module specifications

See undergraduate module specification database (Note - modules are organized by year of delivery).

Appendix 3: Skills matrix