

Course Title	BSc (Hons) Creative Computing
Final Award	BSc (Hons) Creative Computing
Interim Awards	Certificate of Higher Education in Creative Computing Diploma of Higher Education in Creative Computing BSc Creative Computing
Awarding Body	Ravensbourne University London
Teaching Institution	Ravensbourne University London
UCAS Code	I150
HECOS code (with Subject percentage Splits if applicable)	100368 – Creative computing - 100162 Computer systems engineering – 100365 Computer networks – 100366 Computer Science – 100367 Computing and information technology – 100373 Internet technologies – 100375 Web and multimedia technologies – 100440 Digital media
QAA Subject Benchmark	Computing (2022)
External Accrediting Bodies	N/A
Apprenticeship Standard used to inform the development of the course (if applicable)	N/A
Accelerated Degree Option	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Level 6 Top Up Option (online only)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Study Load	<input checked="" type="checkbox"/> Full-time <input checked="" type="checkbox"/> Part-time
Mode of study	<input checked="" type="checkbox"/> Face-to-face <input type="checkbox"/> Blended
Delivery Location(s)	<input checked="" type="checkbox"/> Ravensbourne University campus <input type="checkbox"/> Online
Length(s) of Course(s)	3 years FT 6 years PT
Type (open/closed)	Open
Validation period	Five years (September 2022 – September 2027)
Intended First Cohort Start Date	September 2022
Date produced/amended	22/2/22
Course Leader	TBC
Course Development Team Members	Nick Rothwell Neil Drabble
Course Administrative Contact	Charles Mullany

Course Description

The BSc (Hons) Creative Computing degree is a flexible, innovative course that will enable students to explore how computing and digital technologies can enhance creativity and will help them develop a range of cognitive and technical skills which are highly sought-after in areas such as games, creative commissions, social media and digital advertising.

The boundary between digital and creative roles is blurring all the time, and few graduates have the combination of skills employers are looking for. As such, Ravensbourne’s creative computing course arms students with a portfolio of artistic, design and technical skills through an exciting and flexible programme.

The course regards computer coding as an essential skill for rigorous self-expression as well as practical application, and students will encounter several programming languages of different types, learning their strengths and weaknesses, as they progress through the course. Code is a language for prototyping ideas and exercising them by machine, and the many practical exercises in the course, supported by contextualised background teaching and reflection, encourage generalised thinking across different topics and building the vital creative skill of learning how to learn.

Course Aims

- To understand the fundamentals of good coding and how that applies to programming practice.
- To build a critical language and understanding about software development as a cultural and economic activity.
- To be able to generalise from specific languages and technologies, developing transferable and future-proof skills
- To develop a personal reflective creative process using code as medium for self-expression and for tool building.

Course Learning Outcomes

The course provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas.

On completion of the **BSc (Hons) Creative Computing** students will be able to:

Explore	Evidence and contextualise capacity for utilising and synthesising Creative Computing-specific knowledge, critical & computational thinking, evaluation and reflection, supporting deeper understanding of subject knowledge and innovative complex problem solving. (CLO1)
Create	Critically engage with the cognitive development of ideas, materials, tests and outcomes that may inform practical and theoretical development in physical, written and oral forms aligned to Creative Computing. Evidence ability to synthesise idea development, experimentation, and technical ability supporting fully resolved outcomes and systems regarding communication and presentation for Creative Computing. (CLO2)

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Influence	Evidence a methodical working approach and ethos that critically identifies consideration of social, ethical and environmentally responsible working methods and how this aligns and supports personal development and professional working practices in relation to Creative Computing. (CLO3)
Integrate	Evidence a critical ability to successfully synthesise collaboration, industry interactions & practices and professional working models in order to facilitate self-efficacy, personal agency and professional development in relation to Creative Computing. (CLO4)

Where a student does not complete the full course, but exits with an Ordinary Degree, they will have had the opportunity to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas.

On completion of the **BSc Creative Computing** students will be able to:

Explore	Evidence and contextualise capacity for utilising and synthesising Creative Computing specific knowledge, critical & computational thinking, evaluation and reflection, supporting deeper understanding of subject knowledge and innovative, complex problem solving. (CLO1)
Create	Evidence ability to consider ideas, materials, tests and outcomes that may inform practical and theoretical development in physical, written and oral forms aligned to Creative Computing. Evidence ability to synthesise idea development, experimentation, and technical ability supporting resolved outcomes regarding communication and presentation for Creative Computing. (CLO2)
Influence	Evidence a coherent working approach and ethos that identifies consideration of social ethically and environmentally responsible working methods and how this aligns and supports personal development in relation to Creative Computing. (CLO3)
Integrate	Evidence ability to effectively synthesise collaboration, industry interactions & practices and professional working models in order to facilitate self-efficacy, personal agency and professional development in relation to Creative Computing. (CLO4)

Where a student does not complete the full course, but exits with a Diploma in Higher Education, they will have had the opportunity to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas.

On completion of the **Diploma of Higher Education in Creative Computing** students will be able to:

Explore	Evidence evolving ability to utilise research and critical reflection to support developing understanding of subject knowledge, computational thinking, evaluation and reflection and ability to problem solve in relation to Creative Computing. (CLO1)
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Create	<p>Evidence capacity to combine ideas, materials, tests and outcomes into solutions that inform and guide practical and theoretical development in physical, written and oral forms aligned to Creative Computing.</p> <p>Exhibit developed technical competencies, supporting ideation, communication and presentation in relation to Creative Computing. (CLO2)</p>
Influence	<p>Evidence developing working processes that identify consideration and interpretation of social, ethically and environmentally responsible working methods and how this guides personal professional practice in relation to Creative Computing (CLO3).</p>
Integrate	<p>Evidence evolving ability to engage with collaborative working to support academic development, industry interactions & practices to enhance and progress self-efficacy and professional development in relation to Creative Computing. (CLO4).</p>

Where a student does not complete the full course, but exits with a Certificate of Higher Education, they will have had the opportunity to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas.

On completion of the **Certificate of Higher Education in Creative Computing** students will be able to:

Explore	<p>Demonstrate capacity for engaging with research and critical thinking, developing Creative Computing specific knowledge computational thinking, evaluation and reflection and emerging ability to problem solve in relation to Creative Computing. (CLO1).</p>
Create	<p>Demonstrate capacity to consider ideas, materials, tests and outcomes that may inform practical and theoretical development in physical, written and oral forms in relation to Creative Computing.</p> <p>Exhibit emerging technical competencies, supporting ideation, communication and presentation in relation to Creative Computing. (CLO2).</p>
Influence	<p>Demonstrate emerging working approach/attitude that identifies consideration of social, ethical and environmentally responsible working methods and how this informs personal practice in relation to Creative Computing. (CLO3).</p>
Integrate	<p>Demonstrate emerging capacity to engage with collaboration, teamwork, industry interactions, and professional working practices to support self-efficacy and professional development in relation to Creative Computing. (CLO4).</p>

Ravensbourne University Assessment Criteria

Explore	<p>Research and Analysis Subject Knowledge Critical Thinking and Reflection Problem Solving</p>
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Create	Ideation Experimentation Technical Competence Communication and Presentation
Influence	Social Impact Ethical Impact Environmental Impact
Integrate	Collaboration Entrepreneurship and Enterprise Professional Development

Core Competencies

Each module learning outcome should be aligned to at least one competency.

Competency	Definition	Aligned Assessment Criteria
Cognitive	The ability to acquire, retain and use knowledge, recognise, pose and solve problems. Attributes may include: <ul style="list-style-type: none"> Evaluate their own beliefs, biases and assumptions Evaluate strengths, weaknesses, and fallacies of logic in arguments and information Apply lesson from the past or learned knowledge and skills to new and varied situations Perform basic computations or approach practical problems by choosing appropriately from a variety of mathematical techniques Devise and defend a logical hypothesis to explain observed phenomenon Recognise a problem and devise and implement a plan of action 	Explore, Create, Integrate, Influence
Creative	The ability to generate new ideas, express themselves creatively, innovate and/ or solve complex problems in an original way.	Create
Professional	The ability to understand and effectively meet the expectations of industry partners, through outputs and behaviours.	Integrate, Influence
Emotional, Social and Physical	Emotional -The intrapersonal ability to identify, assess, and regulate one’s own emotions and moods; to discriminate among them and to use this information to guide one’s thinking and actions and where one has to make consequential decisions for oneself. Attributes may include: <ul style="list-style-type: none"> Self-awareness & regulation (including metacognition) Mindfulness Cognitive flexibility 	Explore, Influence, Integrate

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	<ul style="list-style-type: none"> • Emotional resilience • Motivation • Ethical decision- making <hr/> <p>Social - The interpersonal ability to identify & understand the underlying emotions of individuals and groups, enhancing communication efficacy, empathy and influence. Attributes may include:</p> <ul style="list-style-type: none"> • Managing your audience • Coordinating with others • Negotiation • Creativity • People management • Leadership & entrepreneurship • Service orientation • Active listening • Coaching and mentoring <hr/> <p>Physical - The ability to perceive and optimise physiological activity and responses to influence emotion, solve problems or otherwise effect behaviour. Physical intelligence engages the body to train neuron pathways to help change an inappropriate response to an appropriate response. Attributes may include</p> <ul style="list-style-type: none"> • Self-discipline & management • Attention • Reaction & response time • Cognitive & muscle memory • Managing stress • Physical resilience 	
<p>Cultural</p>	<p>The capability to relate to and work effectively across cultures including intercultural engagement, cultural understanding and intercultural communication.</p>	<p>Influence, Integrate</p>
<p>Enterprise and Entrepreneurial</p>	<p>The generation and application of ideas within a practical setting. It combines creativity, idea generation and design thinking, with problem identification, problem solving, and innovation followed by practical action. This can, but does not exclusively, lead to venture creation (UK Quality</p>	<p>Create, Influence, Integrate</p>

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	Assurance Agency, Enterprise and Entrepreneurship Education 2018).	
Digital	The confident adoption of applications, new devices, software and services and the ability to stay up to date with ICT as it evolves. The ability to deal with failures and problems of ICT and to design and implement solutions (Jisc Digital Capabilities Framework)	Explore, Create, Integrate, Influence
Ravensbourne Return	Engagement with inhouse activities including mentoring other students, volunteering, acting as a student rep or ambassador. Demonstrate a knowledge of current events and social issues Identify their personal convictions and explore options for putting these convictions into practice Engagement with the external community through (from) employment, volunteering, participation in a Professional Life or other programme-based project.	Explore, Create, Influence, Integrate,

Learning, Teaching and Assessment

Learning and Teaching methods	Assessment Strategy
<p>All levels will adopt a hybrid strategy in terms of teaching. Modules will blend face to face delivery with sessions taught using online digital platforms alongside the institutional virtual learning environment (VLE).</p> <p>The blended model will support learners to engage with enhanced approaches to Learning & Teaching engagement and expanded parameters of the learning environment. The course curriculum and delivery model will be able to adapt quickly to changes in accessibility and social proximity should they arise.</p> <p>Level 4:</p> <p>At Level 4 skills will be developed through a combination of workshops, lectures, seminars and group exercises, self-directed study, as well as individual or group tutorials.</p> <p>This will include blended modules where students will engage with online institutional or external resources</p>	<p>Level 4:</p> <p>At level 4 students will be introduced to the types of assessment that will be used across the entire course. They will be introduced to working from a brief.</p> <p>Students will have an opportunity to develop different ways of presenting work to tutors and peers.</p> <p>Assessment may include a variety of practical, written and oral tasks such as: blogs, reports, presentations and evidence of experimentation and research. It will require students to demonstrate working methods, and practical outcomes aligned to Creative Computing.</p> <p>Students can express these through a variety of media: written, recorded video, recorded audio and image-based work are acceptable.</p> <p>Each module has a Formative assessment point where students are given feedforward/feedback on work so far and advice and guidance on how to develop and complete projects. This can take the form of a</p>

All module briefs will be created with blended learning in mind but leverage appropriate face to face teaching. Some modules will feature online delivery as part of the normal delivery schedule.

In addition, students may also test their developing disciplinary knowledge with collaborative learning exercises and challenges as directed by module briefs using both digital and physical spaces to achieve goals.

Students will also be introduced to what it means to be creative and how creative people initiate, plan, and execute projects alongside rigorous technical due diligence.

Through set tasks and project work students will be introduced to technical workflows and approaches to prototyping that are common in industry and students will explore how these can inform their creative and professional process.

Learning is facilitated by permanent and sessional teaching staff, who are practising professionals themselves and bring an important industry-informed perspective to the course.

Students will be introduced to industry through skills, discussion of key topics and direct interaction with industry.

Level 4 will also introduce the students to the Professional Life Practice modules that are embedded in each undergraduate learning level. These modules specifically support collaborative experimental practice, entrepreneurship, and enterprise, helping to catalyse, develop and showcase interdisciplinary working methods interaction and innovation.

The Professional Life Modules will also facilitate opportunities to integrate with industry partners in order to establish

one on one with a tutor or small group as per the project brief for the module.

Each module has a Summative assessment point where a final grade is awarded and feed forward is given to the student.

professional currency at the start of the undergraduate journey, and to drive enterprise and employability through the degree experience.

This Module integrates the emerging subject knowledge of each student with working methods from a range of disciplines to create a multidisciplinary synthesis of practice, skills and learning. Students will develop social, cultural, emotional, and cognitive intelligence through projects that facilitate community and industry connections aligned to the Ravensbourne core competencies.

Level 5:

Skills acquired at Level 5 are developed further through a combination of workshops, lectures, seminars, group exercises, self-directed study, as well as individual or group tutorials.

Students also have the ability to work alongside students on other UG courses, on collaborative sessions enabling students to develop team working and understanding of inter-disciplinary working methods.

The Level 5 Modules will inform future progress around portfolio creation and final project and enable students to make career choices around their industry discipline.

In addition, students will test their developing disciplinary knowledge in collaborative scenarios with the opportunity to take part in the Professional Life Practice Modules, and Work Based Learning Modules, offering collaborative and industry aligned opportunities both within Ravensbourne and in external contexts.

Students will also be introduced to what currently constitutes innovative practice within the realm of Creative Computing and explore the interplay of innovation and technological development.

Level 5:

At level 5 the types of assessment evidence required across the Modules are similar to level

4 in scope and breadth. However, students will be encouraged to self-direct their study within particular skill sets.

Formative Assessment

In Level 5 students will be provided with

Formative assessment feedforward/feedback via individual tutorials, group presentations and individual presentations.

In Level 5 there is opportunity for collaborative interactions with peers and industry specifically within the Work Based learning Modules. The Professional Life Practice modules and the Work Based Learning modules support students to engage with external industry professionals and gain knowledge and insight regarding entrepreneurship, enterprise and agency.

Summative Assessment

This will happen at the end of each module and involve the submission for formal assessment of the types of evidence required by each. Again, outcomes for each module will be as flexible as possible, focusing on engagement with the problems the brief describes rather than prescribed work



Visiting speakers and specialists will be invited to deliver lectures or practical workshops, bringing their own specialism and examples of industry work into the sessions.

The Professional Life Practice Modules at Level 5 supports practical, theoretical and industry focused engagement facilitating expertise, experience and interactions with professional aspects of the computer science and software disciplines.

All Level 5 students have the opportunity to undertake the Work Based Learning module at the end of Semester 2. The Work Based Learning module will offer the students the ability to engage with either a work placement or equivalent industry-led experience supporting industry interactions, entrepreneurship and employability skills. The placements will be supported by the careers team at Ravensbourne.

Level 6:

Skills acquired at Level 4 and 5 will be developed and perfected at Level 6 through lectures, seminars, workshops, self-directed study and individual tutorials.

A large proportion of project-based work will be initiated and developed by students themselves, with a view to mastering skills particular to their interests within the discipline. Students will be encouraged to delve deeper into their particular interests through individual tutorials and programmes of study initiated by the students themselves using online and physical resources.

Students will be offered increased responsibility for their own learning undertaking a major project. Whilst students will be encouraged to work in multi-discipline teams to facilitate the most complete playable game outcomes, individuals can undertake major projects tied to the discipline. Students are expected to take on professional attitudes to time and project management, quality assurance, testing, and deployment.

products. Students will need to provide working builds and project files for assessment, if appropriate.

Level 6:

In level 6 the types of assessment evidence required across the Modules are similar to level 5 but are more individually focused.

**Formative Assessment
In Level 6 students will be provided with**

Formative assessment feedforward/feedback via individual tutorials, group presentations and individual presentations. In addition, in Level 6 there is opportunity and encouragement for students to engage with peer and industry feedback.

Summative Assessment

This will happen at the end of each module and involve the submission for formal assessment of the types of evidence required by each.

Again, outcomes for each module will be as flexible as possible, focusing on engagement with the problems the brief describes rather than prescribed work products. Students will

Visiting lecturers will be invited to deliver lectures and/or practical sessions related to their area of work and students will develop an outward facing portfolio to aid graduate progression.

Written work will focus upon critical analysis and reflection of project-based work, with a view to encouraging ongoing development. Within the sphere of theoretical study, students will expand their ability to write reflexively and critically about their discipline and competently be able to contextualise their personal practice.

need to provide working builds and project files for assessment, if appropriate.

Work Placement

Students are encouraged from Level 4 to engage with industry and seek internship opportunities within the industry at Level 5. The careers team within Student Services can facilitate outreach for students to contact companies. Students are provided with membership of industry bodies that can assist with placements.

Students are likely to apply for specific internship or work experience placements with development or publishing companies. They might also apply for zero hours casual work as quality assurance engineers.

Students are encouraged to find industry mentors to assist professional development.

Course Structure

Module Code	Module Title	Shared Module	Mandatory / Elective	Credits
Level 4				
CRC22101	Interaction and Media		Mandatory	20
CRC22102	Coding, Figures and Visuals		Mandatory	20
CRC22104	Code and Web	X (part shared with UXUI)	Mandatory	20
CRC22105	Lights, Code and Making	X (part shared with UXUI)	Mandatory	20
CRC22102	Professional Life Practice “Developing your Practice”	x	Mandatory	20
CRC22106	Professional Life Practice “Exploring your Practice”	x	Mandatory	20
			Total	120
Level 5				
CRC22201	Frameworks, Services and Visualisation		Mandatory	20
CRC22202	AI, Games and Behaviours	X (part shared with Games)	Mandatory	20
CRC22203	Coded Spaces		Mandatory	40
CRC22XXX	Professional Life Practice “Applying your Practice”	x	Mandatory	20
XXX	Work Based Learning		Mandatory	20
			Total	120
			Total	240
Level 6				
CRC22301	Algorithms, Agency and Adaptation		Mandatory	40
CRC22302	Major Project		Mandatory	40
CRC22303	Portfolio, Promotion and Professionalism		Mandatory	20
CRC22XXX	Professional Life Practice “Situating your Practice”	x	Mandatory	20
			Total	120
			Total	360

Learning Hours

Learning Hours (per 20 credit module excluding the Work Placement)			
Staff – Student Contact Hours		Independent Study Hours	
Taught hours	48	Independent study, self-directed study and assessment	152
Total			200

Course Regulations

Entry Requirements
<p>3 x A Levels at Grades CCC or above (96 Tariff points), or BTEC Extended Diploma at MMM (96 Tariff points), or Equivalent level 3 qualifications, <i>Plus</i> GCSE English and Maths at Grade 4 or above.</p>
Accreditation of Prior Learning (if applicable)
<p>Applications are welcomed from those who may not possess formal entry qualifications, mature students, those with work experience or with qualifications other than those listed above. Such applicants should demonstrate sufficient aptitude and potential to complete the course successfully. Applicants will be assessed at interview in accordance with Ravensbourne’s Accreditation of Prior Learning Policy and Procedure and Student Transfer Plan.</p>
Conditions for Progression
<p>Students will be deemed to have passed a module if they achieve a 40% for undergraduate students; or a 50% for postgraduate students.</p> <p>A student who has passed all assessments to date but has not yet reached the end of a level (or stage) will be permitted to proceed into the following term by the Interim Assessment Board.</p>
Reassessment of Failed Elements
<p>Failure in any component will result in a Fail grade for the component.</p> <p>Non-submission in any component will result in a non-submission for the component.</p> <p>Students must then successfully retrieve the failed or non-submitted component by resubmission of assessment in order to pass the module.</p> <p>Where a student does successfully retrieve a component failure, the grade for the component will be capped at 40% (undergraduate) or 50% (postgraduate) (except where Extenuating Circumstances have been approved). The overall grade for the module will be calculated using all achieved grades where there are 2 or more components.</p>

Conditions for the Granting of Awards

A student who completes an approved course of study, shall be awarded BSc (Hons) Creative Computing.

Those students who exit the Course without completing it may be entitled to exit with an award of either a:

1. Certificate of Higher Education in Creative Computing, provided they complete an approved course of modules and the learning outcomes for such award as set out in the Course Specification.
2. Diploma of Higher Education in Creative Computing, provided they complete an approved course of modules and the learning outcomes for such award as set out in the Course Specification.
3. BSc Creative Computing (ordinary degree), provided they complete an approved course of modules and the learning outcomes for such award as set out in the Course Specification.

Any derogation(s) from the Regulations required?

N/A

Student Support	https://www.ravensbourne.ac.uk/student-services
Assessment Regulations	https://www.ravensbourne.ac.uk/staff-and-student-policies

Course Learning Outcomes	CLO1	CLO2	CLO3	CLO4
Level 4 Modules				
CRC22101 Interaction and Media	X	X		X
CRC22102 Coding, Figures and Visuals	X	X		X
CRC22104 Code and Web	X	X		X
CRC22105 Lights, Code and Making	X	X		X
CRC22103 Professional Life Practice	X	X	X	X
CRC22106 Professional Life Practice	X	X		
Level 5 Modules				
CRC22201 Frameworks, Services and Visualisation	X	X		X
CRC22202 AI, Games and Behaviours	X	X	X	
CRC22203 Coded Spaces	X	X		X
CRC22XXX Professional Life Practice	X	X	X	X
XXX Work Based Learning	X	X	X	X
Level 6 Modules				
CRC22301 Algorithms, Agency and Adaptation	X	X	X	
CRC22302 Major Project	X	X	X	X
CRC22303 Portfolio, Promotion and Professionalism	X	X		X
CRC22XXX Professional Life Practice	X	X		X

COURSE SPECIFICATION

Course Diagram

	Semester 1	Semester 2	
Level 4	CRC22101 Interaction and Media 20 credits	CRC22104 Code and Web 20 credits	
120 credits	CRC22102 Coding, Figures and Visuals 20 credits	CRC22105 Lights, Code and Making 20 credits	
	CRC22102 Professional Life Practice 20 credits	CRC22106 Professional Life Practice 20 credits	
	Semester 1	Semester 2	
Level 5	CRC22 201 Frameworks, Services and Visualisation 20 credits	CRC22 203 Coded Spaces 40 credits	XXX Work Based Learning 20 credits
120 credits	CRC22202 AI, Games and Behaviours 20 credits		
	CRC22XXX Professional Life Practice 20 credits		
	Semester 1	Semester 2	
Level 6	CRC22301 Algorithms, Agency and Adaptation 40 credits	CRC22 302 Major Project 40 credits	CRC22303 Portfolio, Promotion and Presentation 20 credits
120 credits	CRC22XXX Professional Life Practice 20 credits		