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UAL Creative Computing Institute Diploma

Awarding Body	University of the Arts London
College	UAL Institute for Creative Computing
School	University of the Arts London
Programme	Institute of Creative Computing (ICC)
Course AOS Code	UAL_CCI
FHEQ Level	Level 5 Diploma
Course Credits	120
Mode	Full Time
Duration of Course	1 year
Valid From	September 1st 2021
QAA Subject Benchmark	Art and Design
Collaboration	N/A
UAL Subject Classification	Creative computing
JACS Code	None
UCAS Code	N/A
PSRB	N/A
Work placement offered	N/A
Course Entry Requirements	To see the University's Regulations on Admissions, please go to the following link:

	http://www.arts.ac.uk/course-regulations/admissions/
	The selection procedures for the course adhere to the Equal Opportunities policy of the University of the Arts London.
	Admission to the Diploma in Creative Computing adheres to progression regulations where students are expected to have completed 2 years' previous study up to Level 5 (or equivalent) in the subject area of their course. Should students fail any credits, during that period, progression regulations would apply whether they could undertake the DCC year.
Selection Criteria	Your performance on the first year and second of study on your current BA course will be taken into consideration with reference to your Course Leader. This will include consideration of your past studentship, attendance, commitment and performance. The overriding concern will be to ensure that, you will have the skills, motivation and commitment to undertake computational practice and to develop self-initiated projects.
	It is vital that you demonstrate that you are an independent learner able to manage your academic studies learning experience and deadlines, initiate projects and steer the quality of your experience. It is also vital you demonstrate that you will be able to thrive in a computationally oriented environment which requires full attendance across a coding intensive curriculum.
	Your application will be reviewed in the light of below listed criteria:
	- A good level of general creative ability; - A sufficient level of technical and craft skill in your disciplinary area and evidence of creative computing practice; - An ability to articulate and express your creative ideas; - A clear and feasible proposal of intent and ambition; - An ability to work as part of a collaborative team; - Evidence of motivation and commitment through

	past performance;
Scheduled Learning and Teaching	During your course you will engage with learning and teaching that includes both online and face-to-face modes. The advertised scheduled activity for the course will be delivered through a combination of live, synchronous and asynchronous on-line learning. Scheduled learning and teaching activity may include lectures, seminars, studio and workshop briefings, tutorials, external visits and project briefings.

Awards and Percentage of Scheduled Learning

Year 1

Percentage of Scheduled Learning	0
Awards	**Credits**
Diploma in Professional Studies	120

Course Aims and Outcomes

The Aims and Outcomes of this Course are as follows:

Aim/Outcome	Description
Aim	Introduce creative computing as a complementary technical and creative specialism to your main UAL degree.
Aim	Develop your skills in creative coding in various relevant coding languages, tools and frameworks.
Aim	Develop computational literacies including an ability to describe the technical requirements of creative computing projects with specialist vocabulary.
Aim	Enhance your understanding of graduate opportunities the digital creative industries.
Aim	Enhance your ability to work in multidisciplinary digital teams.
Aim	Develop computational literacies including a critical understanding of the computational developments shaping the future of the creative industries and society.
Aim	Give you a material understanding of computational technology.
Outcome	Produce creative computing outcomes that show both technical and creative accomplishment.
Outcome	Code in various coding languages and understand the different computational conventions associated with these.
Outcome	Collaborate and use collaborative tools to develop creative software applications.
Outcome	Prototype and pitch software applications and interactive experiences.
Outcome	Understand the opportunities that exist as the intersection of your creative practice and computing.
Outcome	Understand the new graduate opportunities available to you with a creative computing enhanced skillset.

	Distinctive Features
1	Interdisciplinary Teaching: Offering the study of computing alongside creative practice, students are exposed to different modes of learning that help students develop a strong technical fluency with computational technologies with discovery-based learning rooted in creative practice.
2	A material understanding of computational technologies: Students develop an appreciation of what computation is in both a technical and cultural sense. This understanding enables students to explore dominant way of deploying technology at the level of code, for example reengineering facial recognition algorithms to challenge cultural basis.
3	Research informed teaching: By design the course is significantly informed by the research agenda of the Institute within which it sits. As such the course explore domains such as machine intelligence, explores how the contemporary world is being defined through human computer interaction and social platforms.
4	UAL Institute environment: This course represents the core undergraduate provision of the new UAL Creative Computing Institute meaning that students have access to a purpose-built physical environment and technical support, a public programme that explores the creative computing subject and exposure to creative computing research.
5	Critical engagement with technology: Through critical studies and creative practice the course provides students with the opportunities to question the trajectory of technology development and understand their role in producing the future.

Course Detail

The UAL Diploma in Creative Computing will give you a material understanding of the computational technologies that underpin much innovation in both the creative industries and arts and design practice. The Diploma also gives you the opportunity to study with other undergraduates from across the university in a specialist UAL Institute environment and augment your creative practice giving you new opportunities as a creative practitioner. On successful completion of the diploma and the final year of your undergraduate degree you will graduate with an enhanced degree title e.g. **BA Hons, Design (with Creative Computing)**.

Creative graduates with advanced computing skills are in high demand and you will lean to code using industry standard languages and frameworks, how to develop apps and be introduced to emerging areas such as machine learning. You will also develop creative projects informed by these tools and techniques and gain an inside look at London's digital creative economy, exploring both its working practices and the emerging opportunities for technology engaged creative graduates.

As a student at the UAL Creative Computing Institute you will study in a specialist and research rich environment. The Institute provides dedicated technical resources and access to an Institute wide lecture programme and further opportunities to engage with Institute researchers and practitioners through additional events, seminars and workshops. By studying at the UAL Creative Computing Institute, you will join at network of creatives excited by the potential of computational technologies.

Course Units

The unit statements below explain what you will study and how these fit together to provide you with a deep dive into creative computing outside your core creative specialism. The course maintains creative practice alongside the study of creative computing and an introduction to the digital creative industries of London in order that students are exposed to new opportunities and the professional contexts in a world hub of digital creative industries.

The first half of the course sees you study three units in parallel and aims to give an intense grounding in creative coding, computational concepts and creative computing practice.

Unit 1 Creative Coding and Creative Computing Frameworks (20 Credits)

This unit gives you a solid grounding in key coding languages for creative computing and key computational concepts and is designed to be accessible to different skill levels. This will be delivered in up to six hours a week of coding classes that cover languages and frameworks such as JavaScript, P5 and Python and workshops exploring tools and frameworks such as VVVV, Open Frameworks and Max MSP.

Unit 2 Introducing Computational Futures and Artificial Intelligence (20 Credits)

This unit explores the emerging area of Machine Learning and is mix of practical tasks introducing ML frameworks such as TensorFlow and seminars that look at emerging practice across the arts and creative industries that employ some level of artificial intelligence.

Unit 3 Creative Practice: Visual Coding and Physical Computing (20 Credits)

This unit is the creative application of the skills gained in this part of the course and you will produce creative visualisations that are controlled by sensors and actuators. This application of coding skills for visual output will include an introduction to physical computing and electronics prototyping with platforms such as Arduino and Micro:bit.

The second half of the course sees you study three units in parallel and aims to give students an expertise of the process of developing apps in teams it also introduces students to the digital creative industries of London and further develops their creative practice.

Unit 4 Coding for Collaborative App Development (20 Credits)

In this unit you will develop an app concept using one of the dominant platforms such as Apple's iOS or Google's Android. This will give you an understanding of the development process using standard development tools and introduce platform specific coding languages such as Swift. Importantly this unit will include an introduction to collaborative tools for software development.

Unit 5 Work and the Digital Creative Industries (20 Credits)

The aim of this unit is to provide and in depth understanding of both the structure of the creative industries in London and the varied opportunities that exist in what is a diverse sector for people engaged with creative computing.

Unit 6 Creative Practice: Computational Environments (20 Credits)

This unit builds on the creative practice developed earlier in the course and explores scaling that practice by developing spatial interventions. You will explore projection mapping, computer vision and sound tools to explore computational environments.

Learning and Teaching Methods

The course is delivered through a series of seminars introducing core topics, providing context and explaining the purpose of tasks. In labs, you will work both individually and in groups to develop knowledge through a series of practical and creative exercises, undertaken throughout the course. You will work in a programming environment suitable

for the creation of real-time, interactive software. In creative making units' you will be introduced through a range of studio-based workshops and assignments supported where appropriate by lectures, seminars, critiques and visits. Independent creative practice is also required and the course aims to augment your creative practice giving you new opportunities as a creative practitioner.

Assessment Methods

- Exams
- Multiple choice tests
- Course work
- Set tasks
- Presentations
- Creative practice

Reference Points

The following reference points were used in designing the course:

- UAL Teaching Learning and Enhancement Strategy
- UAL Digital Creative Attributes Framework
- QAA Benchmark Statements for Art & Design
- QAA Benchmark Statements for Computer Science
- NESTA Future Skills 2030 Report
- "Culture is Digital" DCMS report 2018
- Industrial Strategy, gov.uk

Course Diagram

	Course Diagram | UAL Diploma Creative Computing																													
	Block One												**Block Two**																		
	Term 1											**Term 2**									**Term 3**										
Week	1	2	3	4	5	6	7	8	9	10		11	12	13	14	15	16	17	18	19	20		21	22	23	24	25	26	27	28	29	30
Level 5	Creative Coding and Creative Computing Frameworks (20 Credits)										S						Coding for Collaborative App Development (20 Credits)														S	
	Introducing Computational Futures and Artificial Intelligence (20 Credits)										S						Work and the Digital Creative Industries (20 Credits)														S	
	Creative Practice: Visual Coding and Physical Computing (20 Credits)										S						Creative Practice: Computational Environments (20 Credits)														S	

Summative Assessment

Indicative summative assessment weeks are noted in the course diagram. For exact dates please refer to your timetable.

IU000050 : Creative Coding and Creative Computing Frameworks

(Mandatory)

Unit Code	IU000050
Unit Title	Creative Coding and Creative Computing Frameworks
FHEQ Level	Level 5
Effective From	September 1st 2020
Duration	1
Credits	20
Programme	Institute of Creative Computing (I001) (S)
Unit Introduction	This unit gives you the opportunity for you to develop coding skills in coding languages and frameworks key to the practice of creative computing. This will be delivered in up to six hours a week of coding classes that cover languages and frameworks such as JavaScript, P5 and Python and workshops exploring tools and frameworks such as VVVV, Open Frameworks and Max MSP. The unit recognises varying levels of coding experience in the diploma cohort and will provide a solid grounding in key coding languages for creative computing and key computational concepts key to the work in the other units of the diploma. The unit will also introduce you to the use of key online communities for solving common coding issues and how to work collaboratively with peers online.
Indicative Content	· Training in the applied use of key coding languages for creative computing · Training in key frameworks for creative computing · Introduction to online collaboration for creative computing
Learning & Teaching Methods	· Coding skills workshops · Independent study using online resources

	· Online Collaboration
	· Seminars
	· Small group work

Learning Outcomes	
LO1	Code creative computing assets in relevant languages (Knowledge, Process)
LO2	Understand the use of key frameworks for creative computing (Knowledge, Process)
LO3	Use online tools to collaborate and support your creative computing projects (Enquiry, Communication)

Unit Assessment Summary
Element – The assessment for this unit is weighted. In element-based assessment, you must achieve at least an E grade in each element, and an aggregate grade of at least D- in the overall unit. Failure (F, or F-), or non-submission in any element defaults to Fail for the unit. Assessment will be against the specified marking criteria.

Elemental	
Assessment Type	Test
% of total	50
Hand-in Week	Refer to Assignment Brief
Briefing	Refer to Assignment Brief
Feedback	Refer to Assignment Brief
Assessment Description	**Element 1: Multiple Choice test:** Students will be presented with a series of questions relating explicitly to course content. They must choose between up to 4 potential correct answers per question **(50%).**
Elemental	
Assessment Type	Skills Test

% of total	50
Hand-in Week	Refer to Assignment Brief
Briefing	Refer to Assignment Brief
Feedback	Refer to Assignment Brief
Assessment Description	**Element 2: Practical Exam:** You will be individually asked to write a basic programme to demonstrate the application of creative coding to a set problem **(50%).**

Scheduled Learning and Teaching
Details of the total scheduled learning and teaching activity for each unit, can be found on your student portal on SITS, the UAL student records system. Click on the "scheduled learning and teaching" tab at the top of the home screen when you have logged in using your UAL details.

Reading List	**Essential Reading** Gross, B., Bohnacker, H., Laub, J. and Lazzeroni, C. (2018) *Generative Design: Visualize, Program, and Create with JavaScript in p5.js*. Chronicle Books. Lieberman, Z. (2012) *Getting Started with openFrameworks*. O'Reilly Media, Incorporated. McCarthy, L., Reas, C. and Fry, B. (2015) *Getting Started with p5.js: Making Interactive Graphics in JavaScript and Processing*. Maker Media, Inc. **Further Reading** Lechner, P. (2014) *Multimedia Programming Using Max/MSP and TouchDesigner*. Packt Publishing Ltd. Perevalov, D. and Tatarnikov, I. (Sodazot) (2015)

	openFrameworks Essentials. Packt Publishing Ltd.
	Shiffman, D. (2012) *The Nature of Code*. D. Shiffman.

IU000051 : Introducing Computational Futures and Artificial Intelligence

(Mandatory)

Unit Code	IU000051
Unit Title	Introducing Computational Futures and Artificial Intelligence
FHEQ Level	Level 5
Effective From	September 1st 2021
Duration	1
Credits	20
Programme	Institute of Creative Computing (I001) (S)
Unit Introduction	This unit is designed to provide students hands on experience with developing creative coding projects with machine learning as well as its potential impact to culture and society. The unit is a mix of practical tasks, introducing ML frameworks such as TensorFlow or JavaScript libraries, such as ml5.js and open source pre-trained models in the cloud, combined with seminars which will explore the history, theory and the application of machine learning algorithms across the arts and creative industries. Principles of data collection & ethics will also be introduced to students. From this exploration we will use your new material understanding of machine learning methods and your developing critical framework to question cultural assumptions regarding artificial intelligence and to speculate in writing about emerging computational futures. This primary aim of this unit is to enable you to look past the hype of 'AI' and develop your critical framework for thinking about computational technology.
Indicative Content	· Artificial Intelligence as a cultural concept · Machine learning frameworks for creative computing · Computational futures and the network as a critical

	lens
Learning & Teaching Methods	· Seminars · Specialist workshops · Independent study · Presentations · Tutorials

Learning Outcomes	
LO1	Understand how machine learning work in practice (Knowledge, Process)
LO2	Understand Artificial Intelligence as a cultural concept (Enquiry)
LO3	Critically discuss computational futures (Enquiry, Communication)

Unit Assessment Summary
Holistic – This unit is assessed holistically (100% of the unit). Assessment will be against the specified marking criteria.

Holistic	
Assessment Type	Essay
% of total	100
Hand-in Week	Refer to Assignment Brief
Briefing	Refer to Assignment Brief
Feedback	Refer to Assignment Brief
Assessment Description	**Essay:** You are asked to produce an essay of at least 2000 words that answers the supplied essay question.

Scheduled Learning and Teaching
Details of the total scheduled learning and teaching activity for each unit, can be found on your student portal on SITS, the UAL student records system.

Click on the "scheduled learning and teaching" tab at the top of the home screen when you have logged in using your UAL details.

Reading List	**Essential Reading**
	Bratton, B.H. (2016) The Stack: On Software and Sovereignty. MIT Press.
	Engelbart, D. (1962). Augmenting Human Intellect: A Conceptual Framework.
	Mital, P Creative Applications of Deep Learning in Tensor Flow
	https://www.kadenze.com/courses/creative-applications-of-deep-learning-with-tensorflow/info
	Further Reading
	Dourish, P. (2017). The Stuff of Bits: An Essay on the Materialities of Information. MIT Press.
	Karparthy, A, Hacker's guide to Neural Networks
	http://karpathy.github.io/neuralnets/
	Manovich, L. (2013) Software Takes Command. A&C Black.
	O'Regan, G. (2012). A Brief History of Computing. Springer Science & Business Media.

IU000052 : Creative Practice: Visual Coding and Physical Computing

(Mandatory)

Unit Code	IU000052
Unit Title	Creative Practice: Visual Coding and Physical Computing
FHEQ Level	Level 5
Effective From	September 1st 2021
Duration	1
Credits	20
Programme	Institute of Creative Computing (I001) (S)
Unit Introduction	This unit involves the creative application of the skills gained in this part of the course and you will produce creative visualisations that are controlled by sensors and actuators. This application of coding skills for visual output could be physical or digital. The application of physical computing and electronics prototyping will use platforms such as Arduino and Micro:bit. You will also be introduced to the history of creative computing practice to understand the creative output of this unit in a wider context.

The aim of the unit is to use your new skills to bring creative outcomes to life and discuss them both as computational and creative objects. The ability to describe creative computational practice is a key professional skill for those work to work in the digital creative industries. |
| Indicative Content | ·   Visual coding methods, tools and process

·   Physical computing methods, tools and process

·   History of creative computing practice |
| Learning & Teaching Methods | ·   Specialist workshops

·   Independent study |

| | · Presentations |
| | · Tutorials |

Learning Outcomes	
LO1	Code interactive visuals (Process, Realisation)
LO2	Build physical computing prototypes (Process, Realisation)
LO3	Evaluate and discuss creative computing practice (Enquiry, Communication)

Unit Assessment Summary
Holistic – This unit is assessed holistically (100% of the unit). Assessment will be against the specified marking criteria.

Holistic	
Assessment Type	Presentation
% of total	100
Hand-in Week	Refer to Assignment Brief
Briefing	Refer to Assignment Brief
Feedback	Refer to Assignment Brief
Assessment Description	**Presentation:** You are to present your creative work to your peers and upload the 'slide deck' from the presentation. Full guidance on this assessment will be provided in the unit brief.

Scheduled Learning and Teaching
Details of the total scheduled learning and teaching activity for each unit, can be found on your student portal on SITS, the UAL student records system. Click on the "scheduled learning and teaching" tab at the top of the home screen when you have logged in using your UAL details.

Reading List	**Essential Reading**
	Blum, J. (2019). Exploring Arduino: Tools and Techniques for Engineering Wizardry. John Wiley & Sons; 2nd edition.
	Igoe, T. (2011). Making things talk (2nd ed.). Farnham: O'Reilly.
	Saka, K. (2010). Karakuri: How to Make Mechanical Paper Models That Move. Saint Martin's Press Inc.
	Bohnacker, H., Gross, B., Laub, J., & Lazzeroni, C. (2018). Generative design : Visualize, program, and create with JavaScript in p5.js. New York: Princeton Architectural Press.
	Further Reading
	McCarthy, L., Reas, C., & Fry, B. (2015). Getting started with p5.js (First ed.).
	Shiffman, D., Fry, S., & Marsh, Z. (2012). The nature of code.
	Shiffman, D. (2008). Learning processing a beginner's guide to programming images, animation, and interaction (The Morgan Kaufmann series in interactive 3D technology). San Francisco, Calif. : Oxford: Morgan Kaufmann ; Elsevier Science [distributor].
	Reas, C., & Fry, B. (2007). Processing : A programming handbook for visual designers and artists. Cambridge, Mass. ; London: MIT Press.
	Klanten, R., Ehmann, S., Hanschke, V., & Feireiss, L. (2011). A touch of code : Interactive installations and experiences. Berlin: Die Gestalten Verlag.

IU000053 : Coding for Collaborative App Development (Mandatory)

Unit Code	IU000053
Unit Title	Coding for Collaborative App Development
FHEQ Level	Level 5
Effective From	September 1st 2020
Duration	1
Credits	20
Programme	Institute of Creative Computing (I001) (S)
Unit Introduction	In this unit you will develop an app concept using one of the dominant platforms such as Apple's iOS or Google's Android. This will give you both an understanding of the development process using standard development tools and introduce platform specific coding languages such as Swift. Importantly this unit will include an introduction to collaborative tools for software development and an introduction to the use of key cloud-based services for deployment and collaboration. You will also explore the ethics of software development and consider issues such as privacy and data handling. The aim of the unit is to expose you to the team-based nature of software development and give you experience of development processes and platforms that are in high demand in the digital creative industries. With this experience you will be able to make an informed decision about what is required to work professionally in this area and what part of the development pipeline you potentially are best suited to.
Indicative Content	· Application development methods, tools and process · Introduction to, collaborative tools, process and cloud-based services · Application design and creative pitching
Learning & Teaching	· Specialist workshops

Methods	· Independent study
	· Team and collaborative working
	· Presentations
	· Tutorials

Learning Outcomes	
LO1	Design and prototype a mobile application (Knowledge, Process)
LO2	Use collaborative software tools (Communication, Realisation)
LO3	Understand and code for a popular mobile development stack (Enquiry, Knowledge)

Unit Assessment Summary
Element – The assessment for this unit is weighted. In element-based assessment, you must achieve at least an E grade in each element, and an aggregate grade of at least D- in the overall unit. Failure (F, or F-), or non-submission in any element defaults to Fail for the unit. Assessment will be against the specified marking criteria.

Elemental	
Assessment Type	Test
% of total	50
Hand-in Week	Refer to Assignment Brief
Briefing	Refer to Assignment Brief
Feedback	Refer to Assignment Brief
Assessment Description	**Element 1: Multiple Choice test:** Students will be presented with a series of questions relating explicitly to course content. You must choose between up to 4 potential correct answers per question **(50%).**
Elemental	

Assessment Type	Skills Test
% of total	50
Hand-in Week	Refer to Assignment Brief
Briefing	Refer to Assignment Brief
Feedback	Refer to Assignment Brief
Assessment Description	**Element 2: Practical Exam:** Students will be individually asked to code a simple app under exam conditions **(50%).**

Scheduled Learning and Teaching
Details of the total scheduled learning and teaching activity for each unit, can be found on your student portal on SITS, the UAL student records system. Click on the "scheduled learning and teaching" tab at the top of the home screen when you have logged in using your UAL details.

Reading List	**Essential Reading** Apple. (2018). App Development with Swift. Apple. Apple. (2018). The Swift Programming Language. Apple. Padmini (2016) *Android App Development: A Complete Tutorial For Beginners*. Educreation Publishing. Tavani, H.T. (2011) Ethics and Technology: Controversies, Questions, and Strategies for Ethical Computing. John Wiley & Sons. **Further Reading** Anon (n.d.) *Android Developers*., *Android Developers* Available at: https://developer.android.com/ (Accessed: 17 March 2019). Moon, K. (2017). Swift 4 Programming Cookbook. Packt

	Publishing.
	Hoffman, J. (2017). Mastering Swift 4, 4th Edition. Packt Publishing.

	Publishing.
	Hoffman, J. (2017). Mastering Swift 4, 4th Edition. Packt Publishing.

IU000054 : Work and the Digital Creative Industries (Mandatory)

Unit Code	IU000054
Unit Title	Work and the Digital Creative Industries
FHEQ Level	Level 5
Effective From	September 1st 2021
Duration	1
Credits	20
Programme	Institute of Creative Computing (I001) (S)
Unit Introduction	In this unit, you will be introduced to how digital creative business are structured and how digital teams put together in different contexts across the digital creative industries. The unit will include studio visits, guest lectures and seminars to explore London's diverse and vibrant digital sector. This unit also covers how to understand your own agency within the creative industries and how you might manage a portfolio career and generate new opportunities for yourself with your newfound skills set. These opportunities might for example include, crowdfunding a technology product or developing an app-based digital service. The aim of this unit is to provide and in depth understanding of both the structure of the creative industries in London and the varied opportunities that exist in what is a diverse sector for people engaged with creative computing. This will be valuable to you as you now have a new specialism in creative computing in addition to your creative specialism and this unit will help you to understand the new graduate destinations and opportunities open to you as a result.
Indicative Content	· Exploring the digital creative Industries · How digital teams work in differing digital sectors · Understanding digital job roles, skills and expectations

	· Digital entrepreneurship
Learning & Teaching Methods	· Seminars
	· Studio Visits
	· Guest Lectures

Learning Outcomes	
LO1	Understand how digital creative industries are structured (Enquiry, Knowledge)
LO2	Understand how digital teams work and are assembled in different contexts (Enquiry, Knowledge)
LO3	Understand new graduate opportunities in the digital creative industries (Knowledge)

Unit Assessment Summary
Holistic – This unit is assessed holistically (100% of the unit). Assessment will be against the specified marking criteria.

Holistic	
Assessment Type	Presentation
% of total	100
Hand-in Week	Refer to Assignment Brief
Briefing	Refer to Assignment Brief
Feedback	Refer to Assignment Brief
Assessment Description	**Presentation:** You are asked to produce a presentation on a topic you choose from a list of selected areas on work and the creative industries that answers the supplied presentation question

Scheduled Learning and Teaching
Details of the total scheduled learning and teaching activity for each unit, can be found on your student portal on SITS, the UAL student records system.

Click on the "scheduled learning and teaching" tab at the top of the home screen when you have logged in using your UAL details.

Reading List	Essential Reading
	Baxter, L. (2017) *Running a Creative Company in the Digital Age: How to successfully set up your own media company*. Oldcastle Books Ltd.

Kare-Silver, M. de (2016) *Building the 2020 Digital team*. Troubador Publishing Ltd.

Kocienda, K. (2018) *Creative Selection: Inside Apple's Design Process During the Golden Age of Steve Jobs*. Pan Macmillan.

Lewrick, M., Link, P. and Leifer, L. (2018) *The Design Thinking Playbook: Mindful Digital Transformation of Teams, Products, Services, Businesses and Ecosystems*. John Wiley & Sons.

Further Reading

Eubanks, V. (2018) Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor. St. Martin's Press.

Fisher, M. (2009). Capitalist Realism: Is There No Alternative? Zero Books.

Lessig, Lawrence. (2005). Free Culture: The Nature and Future of Creativity. Penguin Books.

Tavani, H.T. (2011) Ethics and Technology: Controversies, Questions, and Strategies for Ethical Computing. John Wiley & Sons.

Tozzi, C. (2017). For Fun and Profit. MIT Press. |

IU000055 : Creative Practice: Computational Environments

(Mandatory)

Unit Code	IU000055
Unit Title	Creative Practice: Computational Environments
FHEQ Level	Level 5
Effective From	September 1st 2021
Duration	1
Credits	20
Programme	Institute of Creative Computing (I001) (S)
Unit Introduction	This unit builds on the creative practice developed earlier in the course and explores scaling computational practice by developing spatial interventions. You will explore computer vision, sound tools, physical computing and visual coding to explore computational environments. The aim of this unit is to build on your experience of using the creative computing tools and techniques you have developed to produce interactive experience and consider the potential of computational space in the physical or virtual world. This process will enable you to understand better the potential of computer vision to capture multimodal user behaviours and build novel responsive environments that react to people in interesting ways. There is much demand for expertise of this kind in the digital creative industries and - documented well - the project outcomes for this unit could form a strong addition to your graduation portfolio and form part of the Institute showcase activity at the end of year.
Indicative Content	· Computer vison · Computational environments and interactivity · Development of creative computing practice

Learning & Teaching Methods	· Specialist workshops
	· Independent study
	· Presentations
	· Tutorials

Learning Outcomes	
LO1	Code with computer vision (Process, Realisation)
LO2	Build interactive computational spatial prototypes (Process, Realisation)
LO3	Evaluate and discuss computational space (Enquiry, Communication)

Unit Assessment Summary
Holistic – This unit is assessed holistically (100% of the unit). Assessment will be against the specified marking criteria.

Holistic	
Assessment Type	Presentation
% of total	100
Hand-in Week	Refer to Assignment Brief
Briefing	Refer to Assignment Brief
Feedback	Refer to Assignment Brief
Assessment Description	**Presentation:** You are to present your creative work to your peers and upload the 'slide deck' from the presentation. Full guidance on this assessment will be provided on the unit brief.

Scheduled Learning and Teaching
Details of the total scheduled learning and teaching activity for each unit, can be found on your student portal on SITS, the UAL student records system. Click on the "scheduled learning and teaching" tab at the top of the home screen when

you have logged in using your UAL details.

| Reading List | **Essential Reading**

Deschamps-Sonsino, A. (2018). *Smarter Homes: How Technology Will Change Your Home Life*. Apress.

Klanten, R., Ehmann, S., Hanschke, V., & Feireiss, L. (2011). A touch of code: Interactive installations and experiences. Berlin: Die Gestalten Verlag.

Preece, J. Sharp, H. (2015) Interaction Design: Beyond Human Computer Interaction John Wiley.

Further Reading

Igoe, T. (2011). Making things talk (2nd ed.). Farnham: O'Reilly.

Kristiansen, E. and Harsløf, O. (2015) *Engaging Spaces: Sites of Performance, Interaction, and Reflection*. Museum Tusculanum Press.

Merchant, G. (2013) *Virtual Literacies: Interactive Spaces for Children and Young People*. Routledge. |

The University will use all reasonable endeavours to provide the Course and the services described in this Output. There may be occasions whereby the University needs to add, remove or alter content in relation to your Course as may be appropriate for example the latest requirements of a commissioning or accrediting body, or in response to student feedback, or to comply with applicable law or due to circumstances beyond its control. The University aim to inform you of any changes as soon as is reasonably practicable