ual: creative computing institute

Job Title	Salary
Physical Computing Specialist Technician (T+L)	£34,943 – £42,914
Contract Length	**Hours/FTE**
Permanent	17.5 (0.5FTE)
Grade	**Location**
4	Peckham Road, Camberwell
Accountable to	**College/Institute/Service**
Technical Coordinator Creative Computing Institute	UAL Creative Computing Institute

Purpose of Role

To provide professional technical expertise, guidance and advice in the area of electronics, programming and digital interactive development for the delivery of technical activities within the UAL Creative Computing Institute.

To provide support for student learning, informal and formal training and instruction and the development of proficiency of physical computing, creative coding and relevant platforms, tools and methodologies.

Duties and Responsibilities

- To provide support and guidance in the use of physical computing, creative coding, projection mapping, and related technologies.

- To support students in producing screen-based and physical prototypes for interactive, audio, visual and kinetic experiences.

- To support students in understanding the use of computational thinking, technological scoping, logic and best practices to realise creative computing projects, and solve complex problems using digital tools.

- To support students in the use of tools and techniques related to or supportive of the practice of physical computing and creative coding, including but not limited to:

    o prototyping with electronics and microcontrollers;

    o through-hole and surface mount soldering and rework;

    o the use of APIs and other network-based protocols;

    o command line tools;

    o managing and versioning code;

    o accessing and utilising open source code and libraries;

    o the use and integration of A/V equipment.

- To take responsibility for the day-to-day operation of the technical area, which may involve the following:

    o being available in the technical area to assist with student queries;

    o directing students to appropriate resources or other staff members;

    o overseeing timetabling for bookable areas and loans of specialist equipment that fall under purview of the role;

    o working with academic staff and students in classrooms where appropriate.

- To deliver and supervise physical computing and creative coding activities across a range of courses, providing expert guidance and advice to students. These may take the form of:

    o one-to-one student support on individual projects;

- formal one-off workshops;
- formal, course-aligned ongoing workshops and tutorials;
- informal tutorial sessions with students;
- inductions into software, equipment and processes for students using the technical area.

- To provide feedback to Technical Coordinators, Technical Managers and Course Leaders regarding service levels and student requirements and actively contribute to improving student experiences in the technical area.

- To contribute, as a member of the technical team, to the development of technical resources and knowledge in the technical area, including assisting curriculum planning, research and commercial activities.

- To contribute and collaborate with technical team members, as required, to ensure the key priorities and levels of service are met successfully.

- To ensure compliance with health and safety requirements through risk and COSHH assessments of equipment and materials used in the technical area.

- To contribute to planning, development and delivery of learning activities supporting student learning and research, liaising with academic staff informally and formally in course meetings.

- To provide formal or informal sessions to students that may include demonstration, instruction with a process/technique, coaching with the development and proficiency of a particular skill, technique or process.

- To contribute to the project planning and delivery of exhibitions and events within the institute, including:
  - assisting with setup and testing of supported projects for exhibitions;
  - liaising with academics, students and events teams regarding technical requirements, availability of equipment and health & safety considerations for shows and other events;
  - providing technical support and assistance with equipment for other events (e.g. open days, hosted meet-ups) where needed.

- To work at an agreed level within the terms of the glossary of key terms (describing teaching & learning relationships between technicians and students). This may include workshops, directed learning and collaborations with other technical areas. This will include inductions into software, equipment and processes for students using the technical area.

- To continuously develop skills and knowledge in relevant areas through research, experimentation and professional practice projects in order to maintain an understanding of the changing and developing nature of the area of physical computing, creative coding and interactive technology design and development.

- To diagnose and resolve problems of a highly technical, complicated nature that involve research, testing and documentation of problematic scenarios.

- To identify and procure equipment and materials for the Creative Computing Institute, as agreed with the Technical Coordinator, and the maintenance, repair and renewal of existing equipment where necessary.

- To liaise internally and externally with professionals and recognised practitioners and artists, attend conferences and exhibitions to share and develop ideas, knowledge and expertise that can be translated to support for learning and research activities.

- To be involved with the design, production and development of appropriate teaching and learning materials to suit stakeholder courses by identifying developing areas of interest

or need in specific relevant technologies amongst staff and students and working to revise existing workshops or write new ones as needed.

General

- To perform such duties consistent with your role as may from time to time be assigned to you anywhere within the University.

- To undertake health and safety duties and responsibilities appropriate to the role.

- To work in accordance with the University's Equal Opportunities Policy and the Staff Charter, promoting equality and diversity in your work.

- To undertake continuous personal and professional development, and to support it for any staff you manage through effective use of the University's Planning, Review and Appraisal scheme and staff development opportunities.

- To make full use of all information and communication technologies in adherence to data protection policies to meet the requirements of the role and to promote organisational effectiveness.

- To conduct all financial matters associated with the role in accordance with the University's policies and procedures, as laid down in the Financial Regulations.

- To personally contribute towards reducing the university's impact on the environment and support actions associated with the UAL Sustainability Manifesto (2016 – 2022)

Key Working Relationships

- Technical Coordinator
- Team members
- Technical staff
- Course staff
- University, College and Institute staff
- Suppliers and industry partners

Specific Management Responsibilities

Budgets
Access to technical budget.

Staff
None

Other
Shared responsibility for safety of users and security of equipment in the immediate working environment.

Signed: Tom Lynch
                     Creative Computing Institute – Technical Coordinator
                     Recruiting Manager

Date of last review: 21st September 2019

Job Title: Creative Technology Specialist Technician (T+L)
Grade: 4

The application form sets out a number of competence questions related to some of the following selection criteria. Shortlisting will be based on your responses to these questions. Please make sure you provide evidence to demonstrate clearly how you meet these criteria.

Person Specification	

Specialist Knowledge/ Qualifications	Postgraduate or undergraduate degree in relevant field, such as:
	
	• Creative Technology
	
	• Creative Computing
	
	• Software Engineering
	
	• Computer Science
	
	• Electronics Engineering
	
	Skills essential to the role include:
	
	• Demonstrable knowledge of electronics and circuit design.
	
	• Understanding of tools, workflows and practices in programming, electronics and microcontrollers.
	
	• Fluency in one or more of the following programming/scripting languages:
	
	    ○ C/C++/C#
	
	    ○ Python
	
	    ○ Java
	
	    ○ JavaScript
	
	• Ability to quickly learn new development platforms.
	
	• Working knowledge of code and version management (e.g. Git).
	
	• Knowledge of deployment practices for networked applications, such as DNS, hosting, TCP/IP, FTP and SSH.
	
	• Understanding of digital arts software, such as After Effects, Premiere Pro, Photoshop and Illustrator.
	
	• Comfortable working in Windows, Linux and macOS in both GUI and CLI.

Relevant Experience	Experience of teaching and/or demonstrating techniques related to electronics or programming and electronics. Experience in at least two of the following areas: • Physical computing (e.g. Arduino, Particle, Raspberry Pi, BeagleBone, Bela, DMX). • Creative computing (e.g. Processing, p5.js, openFrameworks). • Networked applications (e.g. Node.js, web APIs). • Computer vision.
Communication Skills	Communicates effectively orally, in writing and/or using visual media. Able to explain complex technical concepts to a mixed-ability and/or

	non-native English-speaking audience in an inclusive and accessible way.
Research, Teaching and Learning	Uses effective teaching, learning or professional practice to support excellent teaching, pedagogy and inclusivity.
Professional Practice	Contributes to advancing professional practice/research or scholarly activity in own area of specialism.
Planning and Managing Resources	Effectively plans, prioritises and organises work to achieve objectives or projects on time.
Teamwork	Works collaboratively in a team and where appropriate across or with different professional groups.
Student Experience or Customer Service	Makes a significant contribution to improving the student or customer experience to promote an inclusive environment for students, colleagues or customers.
Creativity, Innovation and Problem Solving	Identifies innovative and creative solutions to resolve problems.

HERA Ref: SICOM Tech 3