

Digital Micro-Credentials at Swansea University

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Context and background

Swansea University, through the Institute of Coding (IoC) in Wales, has pioneered a series of micro-credential initiatives aimed at addressing the digital skills gap across Wales. The initiative began with a HEFCW-funded pilot (Oct 2021–Jul 2022) involving every Welsh university. This phase focused on preparing institutions to deliver micro-credentials and micro-provisions. It was followed by a continuation project (Jan–Dec 2023) which committed to delivering 30 digital skills courses. The current phase (Jan 2024–Mar 2025), funded by Neath and Swansea Shared Prosperity Fund, is focused solely on Swansea University.

Curriculum and delivery

Courses were designed in consultation with an Industrial Advisory Board, ensuring alignment with industry needs. Topics at Swansea University included Python Programming, Cyber Security, Machine Learning and Software Testing. Other universities offered complementary subjects such as Web Application Security and Game Design.

Delivery methods evolved to suit learner preferences: hybrid formats combining in-person labs with online tutorials proved most effective. Feedback highlighted that fully online courses lacked engagement, while hybrid models offered flexibility without sacrificing structure.



“Online courses are not as efficient because, often, there is not sufficient engagement with a learner. Similarly, if there is no set time and structure and one can do the course ‘in their own time’, it may not be conducive to learning.”

Industrial Advisory Board Member

Learner demographics and engagement

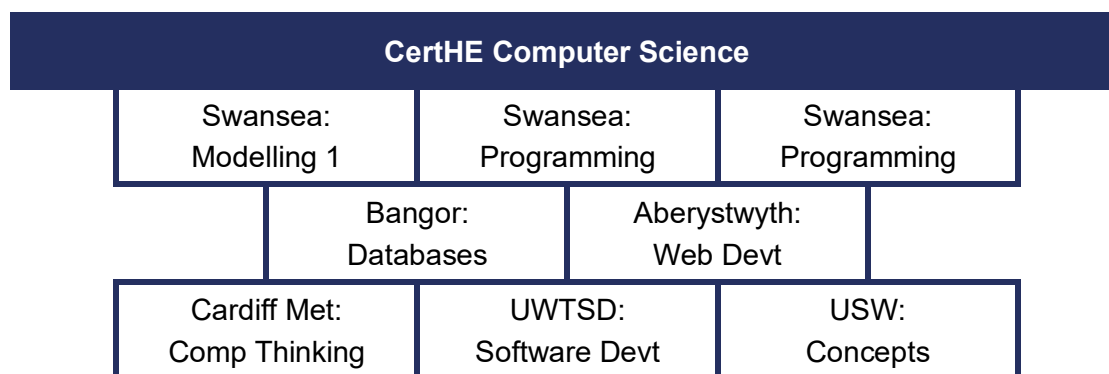
The projects attracted a diverse learner base. Notably, female participation nearly doubled the national average for computer science (38% vs. 20%). Age distribution was broad, with the highest engagement from the 25-44 age group. Data from the 2021-22 cohort showed most learners were employed full-time, underscoring the need for flexible learning options.

Despite strong enrolment, completion rates varied. Many learners opted out of final assessments, preferring to gain skills without formal accreditation. Of those who did sit assessments, 98% passed, indicating high instructional quality.

Challenges and innovations

Key challenges included navigating university systems not designed for standalone courses, slow course approval processes and marketing to non-traditional learners. The team leveraged industrial contacts and degree apprenticeship networks to recruit effectively.

Another innovation was the creation of new pathways into higher education. Micro-credentials served as stepping stones to degree apprenticeships, with several learners progressing to formal study. The initiative also explored stackability, proposing a model where learners could accumulate credits across institutions toward a CertHE in Computer Science.



Impact and future directions

The initiative has demonstrated that micro-credentials can be a powerful tool for lifelong learning, workforce development and widening participation in higher education. Across these three phases, over **1,100 learners** have participated, with Swansea University delivering **seven micro-credentials** to **230 learners** in the latest phase.

Learner feedback was overwhelmingly positive, with 96% likely to recommend and 84% likely to study another course.

Looking ahead, the team aims to refine the stackable model, address issues of portability and fees, and expand beyond computer science. The success at Swansea University offers a replicable model for other institutions seeking to bridge the digital skills gap through flexible, industry-aligned education.

This case study was presented at the QAA Cymru webinar 'Micro-credential postcards from the Nations: Practice-sharing event with a focus on micro-credential development around the UK' on 3 June 2025. The webinar formed part of the work of the Medr-funded Micro-credentials Special Interest Group (MIC.SIG).

Find out more about the MIC.SIG on the QAA Cymru [website](#).

