

Evaluation and Benchmarking of the Diploma in Internet of Things Application Technology from Shenzhen Institute of Information Technology

Context and scope

Shenzhen Institute of Information Technology commissioned Ecctis for an independent evaluation and benchmarking of its Diploma in Internet of Things Application Technology, which was completed in December 2023.

The Diploma in Software Technology is one of 170 programmes delivered by the College in areas such as software engineering, information communication, computer science, finance and economics, and applied foreign languages.

The main aims of the benchmarking were to:

- Establish comparability in the context of the UK through reference to the Regulated Qualifications Framework (RQF), and by extension, the European Qualifications Framework (EQF)¹
- Assess the extent to which the College's underpinning quality assurance meets a set of international standards.

Key findings

The Diploma in Internet of Things Application Technology seeks to develop students' knowledge in areas such as database technology, big data and cloud computing, wireless sensor technology and digital electronics. In line with national requirements, the Diploma also encompasses "public basic courses" which include topics from arts, social sciences and science domains.

The general entry requirement for the programme is the National College Entrance Examination (NCEE, popularly known as the *gaokao* 高考) – comparable to GCE A Level / RQF Level 3 in the UK – or suitable marks in one of the College's own tests.

The Diploma is a three-year full-time programme equating to approximately 2779 hours' guided learning time. Reflecting its vocational focus, the Diploma combines classroom-based study with practical-based simulated learning and a 15 week internship that takes place in the students' third year of study.

Upon completion, many students enter the workforce; however, some students will be eligible

¹ To date, a total of 36 countries have now referenced their national education systems to the EQF.

to apply for top-up Benke (本科) / Bachelor degree programmes. These require a minimum of two years of further study, which shows that the Diploma has similar academic progression routes to that of HND, Diploma of Higher Education and other UK Level 5 awards.

The study revealed several strengths of the Diploma in Internet of Things Application Technology, namely it demonstrated that:

- The College has state of the art learning facilities with ICT equipment that fully satisfy the requirements of the Diploma.
- The 15-week internship provides an extremely valuable opportunity for students to apply the theoretical knowledge they have developed, within an industry setting.
- The collaboration of the College with large technology corporations, like Huawei, significantly assists post-graduation work prospects, producing highly technically qualified individuals.
- The Diploma is well-aligned to industry standards and requirements, as evidenced through its focus on the development and manufacture of IoT devices and application.
- There are clear, documented processes in place for programme design, development and approval; of note is the strong engagement with industry experts and consideration of market demand.
- Admission processes are underpinned by the principles of openness, fairness and impartiality, and are managed through robust oversight mechanisms.

In terms of international comparability, the Diploma in Internet of Things Application Technology has been found comparable to Level 5 of the RQF and EQF. It has also met international quality standards in the following five areas:

- **Admission**
There is a pre-defined and published admissions policy ensuring transparency in the admissions policy and supporting consistency in admissions decisions
- **Programme development, approval, monitoring and review**
There is a clear process in place for the design, approval and monitoring of programmes
- **Teaching and learning**
There is a formalised process for monitoring the quality and effectiveness of delivery, relevant to the modes of study employed
- **Assessment**
Assessment provides a sufficiently fair, valid and reliable evaluation of the intended knowledge, skills and competencies
- **Information**
The information available to prospective students, current students and other interested stakeholders is accurate, transparent and clear for the intended audience.

Engagement

Shenzhen Institute of Information Technology has committed to further development and engagement encompassing:

- Writing new learning outcomes at programme and module level, ensuring these are specific; measurable; and that an indicative 60% of the programme targets a higher level of knowledge and critical thinking skills.
- Developing a programme assessment framework/plan.
- Adopting assessment and marking approaches that sufficiently test critical thinking skills such as analysis and evaluation.
- Ensuring that there is a clear policy on programme assessment plans. Assessments should be developed so that they are clearly linked to intended learning outcomes. There should be clear limits on the use and weighting of attendance as part of the assessment.
- Developing a unified internal quality assurance 'handbook' for the College to bring together all existing written policies and processes and formalise any unwritten policies or processes.
- Maintaining and ensuring adoption by all staff of the unified quality assurance handbook.

Ecctis is a gold-standard provider of services in international education, training, and skills, and in the development and recognition of globally portable qualifications. We are an internationally trusted and respected reference point for qualifications and skills standards.

We are UK-based and operate worldwide, with a global network and client base spanning 62 countries and 5 continents. We have a 20-year track record in international consultancy and development.

Ecctis provides official UK national agency services on behalf of the UK Government in qualifications, skills, and migration – including UK ENIC, formerly UK NARIC.

UK ENIC is the UK National Information Centre for global qualifications and skills. Following the UK's leaving the EU, the former UK NARIC recognition agency function changes from a NARIC (which is an EU-only title) to an ENIC (the wider European title for national recognition agencies) in order to meet the UK's continuing treaty obligations under the [Lisbon Recognition Convention](#).

Since 2019, through our China representatives and Beijing office Nalike we have conducted qualification benchmarking in China and fostered educational links between China and other countries, to support the internationalisation efforts of China's higher vocational colleges.