

Evaluation and Benchmarking of the Diploma in Electrical Automation Technology from Zibo Vocational Institute

Context and scope

Zibo Vocational Institute commissioned Ecctis for an independent evaluation and benchmarking of its Diploma in Electrical Automation Technology, which was completed in September 2022.

The Diploma in Electrical Automation Technology is one of 73 programmes currently offered by the College across subject areas such as Electrical and Mechanical Engineering, IT, Marketing, Accounting and Nursing.

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 Electrical Automation Technology seeks to develop students' knowledge in a range of specialist occupational modules in areas such as design and management of intelligent production systems, equipment manufacturing, robot programming and artificial intelligence. 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 2,800 hours' guided learning time. Reflecting its vocational focus, the Diploma combines classroom-based study with practical-based simulated learning and assessed professional practice in the form of an internship in local industry.

¹ To date, a total of 35 countries have now referenced their national education systems to the EQF.

Upon completion, many students enter the workforce²; however, some students will be eligible 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 Electrical Automation Technology, namely that it demonstrated:

- A well-designed programme to meet industry needs and informed by consultation with industry experts.
- An appropriate balance of theory and practical work, where the focus on 'teaching, learning and doing' approaches help to facilitate development of strong professional skills.
- High quality facilities, including an industrial robot centre, virtual simulation room, automated production line and surface mount technology (SMT), which encourage independent learning and the integration of theory into practice.
- An established quality monitoring system featuring multi-evaluation and performance management; including, teaching documents for individual modules, classroom teaching standards, quality evaluation standards and regular and random classroom sampling.
- Clear, documented processes in place for programme design and approval, and for regular monitoring and review. This includes a management assessment to review departmental performance, education and teaching department performance.
- Defined mechanisms for student engagement in programme development and in evaluating teaching, including teacher-student focus groups and symposiums.

In terms of international comparability, the Diploma in Electrical Automation 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

² The employment rate of graduates is over 97%.

- **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

Zibo Vocational Institute has committed to further development and engagement encompassing:

- Review of the Talent Training Programme document to centre programme design around the intended learning outcomes
- Revision of learning outcomes across all programme modules, to ensure they are specific, measurable and feasible, form a firmer basis for assessment design and marking, and demonstrate a stronger emphasis on critical thinking (analysis, evaluation and reflection) skills in second and third-year modules
- Development of an overarching assessment framework to strengthen overall validity and rigour of assessment to enable closer alignment with international standards and expectations at RQF Level 5
- Review of modular assessments to ensure there is sufficient scope to assess students' critical analysis and evaluation skills
- Review of assessment criteria across modules as appropriate to outline how students are expected to demonstrate higher-level cognitive and professional skills, and to ensure that mark schemes enable markers to consistently and reliably assess and differentiate levels of performance
- 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.