

Evaluation and Benchmarking of the Diploma in Mechatronics Technology from Harbin Vocational and Technical College

Context and scope

Harbin Vocational and Technical College commissioned Ecctis for an independent evaluation and benchmarking of its Diploma in Mechatronics Technology, which was completed in January 2023.

The Diploma in Mechatronics Technology was the first key speciality of the College in 2011 and has strong links with the equipment manufacturing industry in Heilongjiang Province.

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 Mechatronics Technology is designed to train students with specialist skills related to mechatronics such as: The operation of automatic production lines, the application of industrial robots, the production management of electromechanical equipment, sales and technical support, technical transformation, maintenance, and other technical skills. In addition, there is a focus on the engineering of equipment, maintenance and repair, and metal products. 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. Reflecting its vocational focus, the Diploma combines classroom-based study with project-based simulated learning and assessed professional practice in the form of an internship.

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

¹ To date, a total of 35 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 Mechatronics Technology, namely that it demonstrated:

- A strong focus on building practical and technical skills that can lead to employability across a range of roles within the sector.
- A range of valuable assessment methods are used drawing on different skills and assessing students across varying criteria.
- The programme assesses students in both theoretical and practical skills which reflect the fundamental needs in employment, both in core knowledge and how to apply it.
- The programme has clear links with enterprises and employers within the wider field. This provides clear support for students entering into employment or a further related study after the completion of the programme.
- There is open and transparent information around admissions available online.
- Teachers have the relevant skills along with industry and research experience and are monitored at different levels, including departmental and institutional, which involves teacher observations and reviews.
- A clear process for programme development, monitoring and review.

In terms of international comparability, the Diploma in Mechatronics 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

Harbin Vocational and Technical College has committed to further development and engagement encompassing:

- A review of the Talent Training Programme document to centre programme design around the intended learning outcomes.
- A 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.
- To consider how learning outcomes can demonstrate progression in the development of skills across the programme.
- The 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.
- The review of existing assessment marking approaches, in particular for the end-of-module examinations.
- 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.