

Evaluation and Benchmarking of the Diploma in Mechatronics from Liuzhou Vocational & Technical College

Context and scope

Liuzhou Vocational & Technical College commissioned Ecctis for an independent evaluation and benchmarking of its Diploma in Mechatronics, which was completed in August 2023.

The Diploma in Mechatronics is one of 48 programmes delivered by the College, alongside programmes in the areas of electromechanical engineering, automobile engineering, electronic information engineering, and environment and food engineering.

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 seeks to develop students' knowledge in equipment and production lines, maintenance of mechatronics equipment, and CNC machining. 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 2832 hours' guided learning time. Reflecting its vocational focus, the Diploma combines classroom-based study with practical-based simulated learning and a year long internship for the development of practical skills within a real work environment.

Upon completion, many students enter the workforce; however, some students will be eligible to apply for top-up Benke (本科) / Bachelor degree programmes. These require a minimum of

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

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, namely that it demonstrated:

- The practical facilities allow a strong link between the classroom and theoretical learning.
- Enrolment procedures are clearly documented and effectively executed.
- A review of sample assessments used in the Diploma found that the graduation project has features of RQF Level 5 assessments.
- The processes for designing new programmes and reviewing existing programmes effectively engage external stakeholders and thoroughly assess the current labour market requirements.
- The dual-teacher system ensures that professional and industry experts can be fully engaged with teaching on the programme.
- Assessment processes are fair, valid, and reliable evaluation of student achievement.
- Appropriate structures are in place to ensure that published information is accurate, clear, and up to date.

In terms of international comparability, the Diploma in Mechatronics 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

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

- Writing new learning outcomes at the programme and module level, ensuring these are specific and measurable, and target higher knowledge and critical thinking skills.
- Developing a programme assessment framework/plan. Revising assessment briefs to ensure sufficient testing of critical thinking skills such as analysis and evaluation, coherent with the new learning outcomes.
- 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.