

Evaluation and Benchmarking of the Diploma in Mechanical Manufacturing and Automation from Xuzhou Vocational College of Industrial Technology

Context and scope

Xuzhou Vocational College of Industrial Technology commissioned Ecctis for an independent evaluation and benchmarking of its Diploma in Mechanical Manufacturing and Automation, which was completed in August 2023.

The Diploma in Mechanical Manufacturing and Automation is one of 39 programmes delivered by the College including programmes in areas such as machinery manufacturing and automation, logistics management, and pharmaceutical production.

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 Mechanical Manufacturing and Automation seeks to develop students' knowledge in CNC machine tool operation, product assembly, and product debugging. In line with national requirements, the Diploma also encompasses "public basic courses" which include topics from the 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 2684 hours' guided learning time. Reflecting its vocational focus, the Diploma combines classroom-based study with practical-based simulated learning and a 384-hour internship within the final year of study.

Upon completion, many students enter the workforce;² however, some students will be

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

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 Mechanical Manufacturing and Automation, namely it demonstrated that:

- In line with intended vocational roles, the Diploma effectively embeds theoretical and technical knowledge into practical work. Further underpinned by excellent practical workshops and laboratories, students are well set up to apply knowledge and theory to real-life situations.
- A variety of assessment performance processes are used depending on the module category, meaning assessment methods are flexible depending on the content of the modules.
- Assessments are adapted to suit the subject matter of modules with the weighting of individual methods of assessment depending on the subject matter of the module and the mix of methods used. Modules with more practical content can have assessments based on the completion of tasks with no final exam if required.
- The approach to ensuring fair and equal treatment of students, including special needs consideration, is a positive feature.
- There is a process of establishing the need for the programme in the region and engagement with the sector in determining the requirements/curriculum are positive features.
- CPD opportunities are well structured and readily available to teachers.
- There is a detailed approach taken to secure good teaching practices and embrace regular teaching observations.

In terms of international comparability, the Diploma in Mechanical Manufacturing and Automation 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.

² The employment rate of graduates is typically above 98%.

- **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

Xuzhou Vocational College of Industrial Technology has committed to further development and engagement encompassing:

- Writing new learning outcomes at programme and module level, ensuring these are specific, measurable, and feasible. An indicative 60% of the programme's LOs must explicitly target 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.
- Ensuring that moderation is both rigorous for relevant types of assessment, and that its associated policies are fully documented at programme and College level.
- Develop 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, and our UK China Council and UK NARIC China Council projects, 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.