

Evaluation and Benchmarking of the Diploma in Applied Chemical Technology from Changzhou Vocational Institute of Engineering

Context and scope

Changzhou Vocational Institute of Engineering commissioned Ecctis for an independent evaluation and benchmarking of its Diploma in Applied Chemical Technology, which was completed in July 2023.

The Diploma in Applied Chemical Technology is one of 42 programmes delivered by the College, alongside Intelligent Welding Technology, Construction Engineering Technology, and Fine Chemical Production Technology.

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 Applied Chemical Technology seeks to develop students' knowledge in chemical engineering, chemical distillation, and chemical production. 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 2600 hours of guided learning time. Reflecting its vocational focus, the Diploma combines classroom-based study with practical-based simulated learning and a 10-week internship within training bases and plants.

Upon completion, many students enter the workforce;² however, some students will be eligible to apply for top-up Benke (本科) / Bachelor degree programmes. These require a

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

² The employment rate of graduates is typically 97%.

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 Applied Chemical Technology, namely that it demonstrated:

- That the College offers a wide range of optional modules to better meet the students' needs.
- The College has large scale facilities and several industrial training bases for the students to do practice. This provides excellent practical training in real plants and gives the students great advantage in seeking employment.
- That upon completion of the programme, most graduates find employment in chemical industry.

In terms of international comparability, the Diploma in Applied Chemical 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

Changzhou Vocational Institute of Engineering 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.
- Development of a programme assessment framework/plan. As well as 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.
- 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.