END POINT ASSESSMENT ENGINEERING DESIGN TECHNICIAN

V1.2

End Point Assessment from NOCN

LEVEL 3

DURATION 42 MONTHS

MAXIMUM FUNDING £24K

Role Profile

This occupation is found in a wide range of industries of national importance including but not limited to power and water infrastructure, petrochemical, oil and gas, nuclear, renewables, food and drink processing, defence, chemicals and pharmaceuticals. This is a core and options apprenticeship standard. Apprentices will be trained and assessed against the core and one option. There are five options:

- Electrical power design technician
- Control and instrumentation design technician
- Mechanical design technician
- Piping design technician
- Structural design technician

The broad purpose of the occupation is to contribute to the preparation of design solutions and produce designs, drawings or models for structures, piping, electrical systems, control and instrumentation systems or mechanical components. They must understand technical models, drawings and specifications and be able to create their own. They will identify factors likely to affect design decisions, produce Computer Aided Design (CAD) models and engineering drawings and be able to communicate design information to internal and external parties.

In their daily work, an employee in this occupation interacts with a range of internal and external stakeholders. They are usually based at office locations within project design teams and occasionally work at on-site locations. They are required to understand on-site hazards and health, safety and environmental requirements.

An employee in this occupation will be responsible for contributing to the design of engineering components, structures and systems. They will typically report to an engineering design manager for supervision, greater levels of technical guidance and support, review approvals and sign-off.

On-Programme: What apprentices need to learn

The apprentice will be assessed on the knowledge, skills and behaviours required for the Engineering Design Technician v1.2 apprenticeship standard.

All apprentices must complete the required amount of off-the-job training specified by the apprenticeship funding rules. Specific rules govern this, and it must take place in the apprentice's contracted hours.

Refer to the IfATE website for further details on the apprenticeship standard and assessment plan.

End Point Assessment

End Point Assessment is the final stage of the apprenticeship. As defined in the assessment plan, the End Point Assessment for the Level 3 Engineering Design Technician consists of the following events.

Multiple-choice knowledge Test:

The multiple choice knowledge test contains questions that relate to specific knowledge areas of the apprenticeship standard areas to be covered in the test. The test involves 35 questions, 25 relating to core knowledge criteria and 10 relating to the apprentice's chosen pathway knowledge criteria. The apprentice has 70 minutes to complete the test.

Project with presentation and questioning:

The Project with presentation and questioning has 2 components:

- project with a project output
- presentation with questions and answers

The Work Based Design Project will be chosen by the apprentice, employer and an NOCN assessor to meet the KSB's. The apprentice has to plan, design, and recommend a solution based on their chosen option (mechanical, electrical power, structural, piping, or control and instrumentation).

The project must produce at least one completed design as part of the output, where the apprentice has produced the design without assistance. It should include evidence of multiple stakeholder engagement and communications. The project report should be 3000 words

The apprentice must complete and submit the report and any presentation materials to NOCN by the end of week 12 of the EPA period.

The presentation with questions must last 45 minutes, to include the presentation of 20 minutes and questioning lasting 25 minutes. This assessment can take place remotely.

Interview underpinned by a portfolio of evidence:

The interview will involve the questions that will focus on coverage of prior learning or activity in the context of the role as Engineering Design Technician shown in the portfolio of evidence. An NOCN assessor will ask a minimum of 5 questions, the interview will last for 60 minutes and will cover:

- Health and safety
- Compliance, professionalism and ethics
- Design factors
- Sustainable design concepts
- Design evaluation and quality assurance
- Communication
- Equality, diversity and inclusion
- Digital literacy
- Continued professional development

Grading

The final grade to be awarded to the apprentice will be based on the scoring of the three components of the end point assessment. The assessment methods are weighted evenly. The apprentice will be awarded a Pass, Merit or Distinction.

Apprentices must pass all three assessment methods to pass the end point assessment.

Results and Certification

On successful completion, NOCN will issue an EPA grade notification and apply to the Education and Skills Funding Agency (ESFA) to produce the final apprenticeship certificate.

Who are we?

We are a charity whose core aims are to help learners reach their potential and organisations thrive. The group includes business units specialising in regulated UK and international qualifications, End Point Assessment, Access to Higher Education, assured short courses, SMART job cards, assessment services, consultancy, and research.

We influence: We work closely with regulators and governments to influence policy decisions affecting the sector on behalf of the providers we serve.

We specialise: Our subject matter experts create learning content tailored to meet the future needs of the sectors we operate in.

We care: We aim to work in partnership with our customers, offering support and training to ensure an excellent learner experience.

We are Sustainable: In our pursuit to create long term ecological, social, and economic value in all that we do to support the Net-Zero economy through individual actions and organisational strategy and initiatives.