

Consultation on the reform of the WJEC Vocational Award in Engineering (Technical Award)

Our current Vocational Award in Engineering was launched for first teaching in 2014 with the first award in 2016. It has been approved as a Technical Award for inclusion in Key Stage 4 performance tables since 2016 and will remain on the performance tables until 2023.

We are currently reforming this qualification to meet Ofqual and DfE requirements for qualifications to be included in performance tables from 2024 onwards. At the same time, we are taking the opportunity to revise and update the qualification to reflect changes in the sector and feedback from centres.

We are currently seeking views from centres on our high-level proposals. Feedback at this stage will help inform the final shape and content of the qualification. You can access the consultation questions in a Microsoft Form that is available via a link at the end of this document.

The specification for our current Vocational Award in Engineering can be downloaded from the [Eduqas website](#).

The UK Engineering sector

Engineering is a driving force in the UK's economy, accounting for 21.4% (£1.2 trillion) of the UK's £5.7 trillion turnover in 2018¹. However, there is a considerable shortage of appropriately skilled workers in the engineering sector. One of the reasons for this is due to a lack of awareness among young people of the educational routes into engineering occupations, despite the fact that pursuing STEM subjects remains a priority for many young people, and, according to EngineeringUK, the proportion of young people aged 11 to 14 who said they would consider a career in engineering was 54.7% in 2019.

The reformed Vocational Award in Engineering

The WJEC Vocational Award in Engineering is designed to provide learners aged 14-16 with a broad introduction to key elements of engineering rather than targeting a specific sub-sector of the industry. Learners will develop a range of general and specialist knowledge, understanding and skills that will support their progression to further study.

The qualification is being designed to build on skills, knowledge and understanding acquired at Key Stage 3, particularly skills related to literacy, numeracy, use of technology and design. It will

¹ <https://www.engineeringuk.com/research/engineering-uk-report/>

complement a range of other subjects including GCSEs in design and technology, maths, English, physics and chemistry.

Proposals relating to the qualification structure and topic areas included

Our current Vocational Award in Engineering is made up of three mandatory units:

Unit	Unit title	Assessment	GLH
1	Engineering Design	Internal controlled task	30
2	Producing Engineering Products	Internal controlled task	60
3	Engineering Problems	External examination	30

As part of the redevelopment of this qualification we are considering two different structures:

Option One – Retain the current three-unit structure

Unit	Unit title	Assessment	GLH
1	Understanding Engineering Drawings	Internal controlled task	20
2	Producing Engineering Products	Internal controlled task	52
3	Engineering Problems	External examination	48

In this option, the size of Unit 3 would be increased to 48GLH and contribute 40% to the total qualification grade. The content would be refreshed and increased to include additional maths content such as Ohms Law, area, volume, simple equations, addition, and subtraction. We believe that this additional content will better prepare candidates to progress to Level 3 qualifications in related areas.

Option Two - Reduce the number of units to two

Unit	Unit title	Assessment	GLH
1	Understanding Engineering Drawings	External controlled task	48
2	Producing Engineering Products	Internal controlled task	72

In this option, the content of the current Unit 3 and the additional maths content outlined in Option 1 would be embedded across Units 1 and 2 as appropriate. This structure gives the potential for greater holistic and contextualised teaching and learning and potentially reduces the assessment burden for centres and candidates.

In either structure, topics covered would include:

Engineering Drawings

Learners will explore the design process, asking questions to find answers to typical design problems that address what products need to do in order to address the needs of their users. They will learn how to analyse a product to see what features make it work and how it meets certain requirements, and how to take ideas from different products in order to produce a design specification for a product.

Engineering Products

Learners will have the opportunity to use their skills to develop an engineered product. They will explore the range of engineering processes, equipment and tools that make engineered products, and will work from engineering information as they try out different ways of engineering a product.

Engineering Problems

Learners will explore the crucial role of an engineer to solve problems that are presented by everyday life. Learner will be able to start to follow in the footsteps of engineers who have made such significant impacts on the way we travel, work and live. Learners will learn about materials, processes and maths that engineers use and how they are used to solve problems, and they will learn to follow a process and develop drawing skills to communicate their solutions.

Proposals relating to our approach to assessment

As indicated in the qualification structure above, the proposed approach to assessment will be informed by the qualification structure.

In option one, it is proposed that Unit 3 is assessed through an external examination. We believe that the content of Unit 3 in this option lends itself to an external examination and this assessment method will help prepare learners for further study in engineering related subjects where external examinations are a common component. We currently offer on-screen assessment for a number of our Vocational Awards and feedback from both centres and learners has indicated that this is engaging and motivating for learners. On-screen assessment also allows us to introduce new and innovative question types including the use of audio and/or video clips where appropriate. We therefore propose that the external examination in the new Vocational Award in Engineering is available as an on-screen assessment.

The first assessment of this qualification will be in 2024 and we anticipate that there will be greater use of technology in learning and assessment by this time. We will keep this proposal under review throughout the development process and will consult with centres and stakeholders to ensure that schools have the technical infrastructure in place before we make a final decision.

Units 1 and 2 would be assessed through internally assessed assignments completed under controlled conditions. Both assignments will include a series of practical tasks to assess learners' underpinning knowledge and understanding as well as their practical skills. Due to the vocational nature of the subject, it is our intention that the majority of the marks for Unit 2 will be awarded for practical engineering skills.

In option two, Unit 1 would be assessed through an external controlled assignment which learners would need to complete within a set time frame, for example within a three-week period. Externally controlled assignments offer the potential for learners to demonstrate their skills, knowledge and understanding in more practical ways and can offer an alternative for those learners who typically underperform in external examinations. However, it can result in additional burden and manageability issues for centres.

Additional areas for consideration

In addition to your views on the proposals for this qualification we are also interested in hearing your views on a number of other areas including resources. Within the online form, there is an opportunity to join a closed forum to discuss these areas further.

Consultation questions

To provide your views on these proposals please complete the online form [here](#).