



Teaching Engineering
at Level 3?

Choose BTEC Nationals



Welcome to your Guide to BTEC Level 3 Nationals in:

🕒 Engineering

Your guide includes everything you need to know about the BTEC Level 3 Nationals Engineering qualifications, why universities and employers are so excited about BTEC qualifications, and why **around 1 in 4 students entering university in the UK do so with a BTEC.***

*Source: UCAS Progression Pathways – Jan 2016

Contents

Introducing BTEC Level 3 Nationals

Why choose BTEC Nationals?	4–5
The route to success	6–7

Explore your BTEC Level 3 Nationals

Your qualifications explained	8–9
Engineering	10–11

Teaching BTEC Level 3 Nationals

Course materials	12–13
Published resources	14–15
myBTEC	16
Training	17
Delivering BTEC	18–19

Assessing BTEC Level 3 Nationals

Assessment	20
Grading	21

BTEC for Levels 1 and 2

BTEC Level 1 Introductory	22
BTEC Level 2 Technicals	23

The skills to succeed – the confidence to progress

Why choose BTEC Nationals?

Young people taking their first steps towards a new career need the right blend of **technical and academic skills** in order to become the highly skilled, work-ready individuals employers and universities look for.

BTEC Level 3 Nationals are vocational qualifications designed to help your learners succeed. They have been developed in collaboration with over 5,000 universities, employers and professional bodies with **employability at the heart**, so your learners can develop the skills and confidence they will need to step into their future.

Why universities choose BTEC



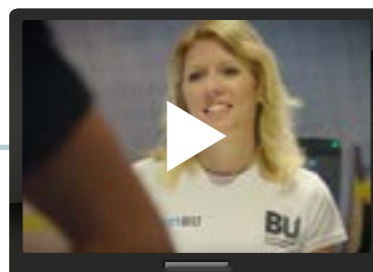
quals.pearson.com/BTECprogress17Guide

Why employers choose BTEC



quals.pearson.com/BTECprogress17Guide

Why students choose BTEC



quals.pearson.com/BTECprogress17Guide

What's new

Your new BTEC Level 3 Nationals qualifications take a unit-by-unit approach and provide you learners with practical, work-related courses. They offer:

Combination of assessment styles

Learners can demonstrate their knowledge, skills and understanding through work-related contexts. (see page 20 for details).

Large foundation of mandatory units

Universities and employers have evidence of a consistent level of core knowledge and skills.

Comprehensive support

We've listened to feedback and put together our most comprehensive support package yet. (see pages 18–23 for details).

The skills to succeed – the confidence to progress





The route to success

After 30 years of proven success, more and more employers and Higher Education institutions across the globe are choosing BTEC-qualified candidates for their **practical knowledge** and **employability skills**.

More than a million learners choose BTEC each year.

BTEC Level 3 Nationals in Engineering offer your learners:

- ① **Work-related learning**, giving learners an edge and opening the door to higher education or employment in the engineering sector.
- ② **Clear progression routes** into higher education when taken alongside other courses, an apprenticeship or training routes in the legal sector.
- ③ **Transferable skills development** such as case study research, teamwork and client communication.

The skills to succeed – the confidence to progress

“BTEC courses give you real, hands-on experience. It’s what I call ‘learning by doing’ and gives you the skills today’s employers are looking for.”

*Peter Jones CBE,
Entrepreneur*



Find out why **Peter Jones** and our other ambassadors choose **BTEC** at quals.pearson.com/BTECsuccess17guide.

See some great BTEC success stories and meet our **BTEC Engineering Student** of the Year 2017 at: quals.pearson.com/BTECawards17guide



Did you know...

4 out of 5 BTEC students go on to receive a **First or Second class degree**

(The outcomes associated with the BTEC route of degree level acquisition, London Economics 2013)

37% of businesses prefer recruits to hold a mix of academic and vocational qualifications or value them equally

(Inspiring Growth: Pearson/Skills CBI Skills survey 2015)

Your BTEC Nationals Engineering qualifications explained

BTEC Level 3 Nationals Engineering courses offer a flexible range of qualifications that can be studied alongside other level 3 qualifications such as A levels or other BTEC Nationals as part of a larger programme of study, or as the main focus of study.

- They are designed for Post-16 Level 3 learners wishing to go on to further or higher level study of the sector or directly to employment.
- All sizes attract **UCAS points** and are widely recognised by universities and employers.

Find out more

The following pages provide you with an overview of each course. For full details or to download your specifications please go to quals.pearson.com/BTECNatsEngineering16Guide.

Your BTEC Level 3 Engineering qualifications are available in a range of sizes and are either **Applied General** or **Tech level-style** qualifications.

Applied General qualifications

For learners progressing to their career through higher level study, although they could go directly into employment at the end of the course. They will have the opportunity to:

- **choose between different qualification sizes** so they have the option to study full or part-time or take a BTEC alongside other level 3 qualifications such as A levels.
- develop **transferable knowledge and skills**.

Tech Level qualifications

For learners wishing to progress directly to employment or apprenticeships through specialist study, or choose to go on to higher level study. They will have the opportunity to:

- **choose between different qualification sizes** so they have the option to study full or part-time or take a BTEC alongside other level 3 qualifications such as A levels
- equip themselves with **specialist knowledge** and skills for their chosen career path
- develop **transferable knowledge and skills**.

The skills to succeed – the confidence to progress

Engineering

The chart below gives you an overview of the course sizes available in your BTEC Level 3 Nationals in Engineering.



Applied General

Extended Certificate in Engineering 360 GLH	Foundation Diploma in Engineering 540 GLH
Same size as 1 A Level Applied General	Same size as 1.5 A Level Applied General
Total units: 4 3 Mandatory Units PLUS 1 Optional Unit	Total units: 7 4 Mandatory Units PLUS 3 Optional Units
Purpose: <ul style="list-style-type: none"> ⦿ Provides a broad basis of study for the engineering sector ⦿ Designed to support progression to higher education when taken as part of a study program that includes other appropriate BTEC National qualifications or A Levels 	Purpose: <ul style="list-style-type: none"> ⦿ Designed as a 1 year full-time course that supports progression to an apprenticeship in engineering or to a further year of study at Level 3 ⦿ Supports progression to higher education if taken as part of a study program that includes other BTEC National qualifications or A Levels

Your BTEC Level 3 Nationals in Engineering provide:

- ⦿ **flexibility** for your students to progress to larger-size qualifications or specialise
- ⦿ opportunity for students to showcase their skills through **practical assessments**
- ⦿ the **underpinning knowledge and skills** needed to meet industry requirements

Tech Level

Diploma in Engineering 720 GLH	Extended Diploma in Engineering 1080 GLH
Same size as 2 A Levels Tech Level	Same size as 3 A Levels Tech Level
Total units: 10 5 Mandatory Units PLUS 5 Optional Units	Total units: 15 7 Mandatory Units PLUS 8 Optional Units
Purpose: <ul style="list-style-type: none"> ⦿ Designed to be the substantive part of a 16-19 study program for learners who want a strong core of sector study and a focus on the wider engineering industry ⦿ May be complemented with other BTEC National qualifications or A Levels or non-qualification elements to support progression to specific job roles or to higher education courses in engineering 	Purpose: <ul style="list-style-type: none"> ⦿ Designed as a 2 year full-time course that meets entry requirements for learners wanting to progress to employment in the engineering sector ⦿ Learners gain relevant skills and knowledge from studying a range of content focused on electrical, electronic and mechanical disciplines

Included in performance measures in England – see website for full details

*please see specification for details of all Optional Units available.
Information correct at time of publication – please see specification for latest information.

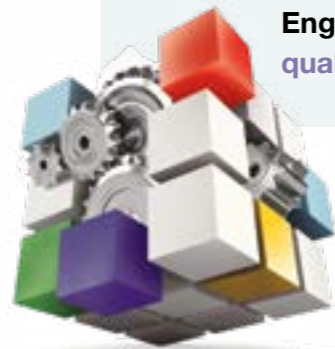
Find out more
 For **Teaching support** see page 18 • For **Assessment** see page 26
 Download your **specification** at: quals.pearson.com/BTECNatsEngineering16Guide

Course materials

BTEC Level 3 Nationals in Engineering have a comprehensive range of FREE course materials available to help with **planning and teaching**, as well as **assessing and tracking** progress of your learners.

Find out more

For full details of all the support available please see website:



Engineering
quals.pearson.com/BTECNatsEngineering16Guide

Plan

We've a bank of support materials designed to help you choose and plan the right course for your learners including:

- Specifications
- Sample Assessment Materials
- Delivery plans
- myBTEC planning tools
- Authorised Assignment Briefs
- Getting Ready to Teach free events

Teach

You'll also find a wide range of teaching and learning materials to help you deliver your course such as:

- Delivery guides
- Schemes of work
- Skills for Learning and Work Activity Sheets
- Training events
- Published resources

Assess and Track

There's also a selection of resources designed to help you prepare for assessment and and track learner progress:

- Sample Assessment Materials
- Sample Marked Learner Work
- Authorised Assignment Briefs
- Quality Assurance guides
- myBTEC progress tracking

Find out more

- See page 17 for full details about free training events
- Download your specifications at: quals.pearson.com/BTECNatsEngineering16Guide

The skills to succeed – the confidence to progress

Published resources

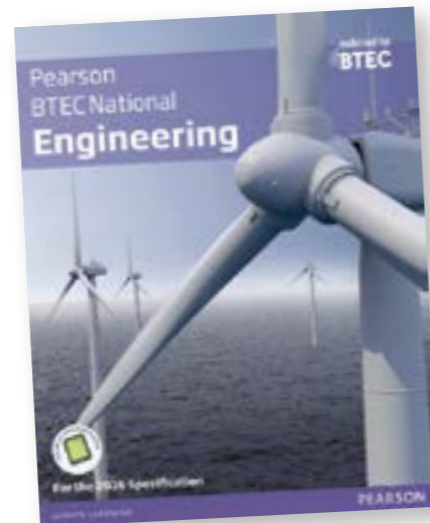
We know it can be time-consuming and tricky to create lessons that work for each of your students, stretching the more able and supporting lower ability. That's why our resources are built around established pedagogical principles, to give your students targeted support and help them improve their understanding and progress.

This pedagogy runs through the:

Student Book: features throughout help learners to build knowledge, understand how to excel in assessment, reflect and evaluate learning, and link their learning to real-life workplace scenarios.

Student book 1 with ActiveBook

- Help learners develop and apply principles and practical knowledge
- Include preparation for assessment
- Encourage self-evaluation
- Accompanied by an ActiveBook (online versions of the Student Books)
- Develop a core of engineering skills, developing and applying scientific principles and practical knowledge to transform ideas and materials into products and systems safely



Resources built around learning principles you can trust

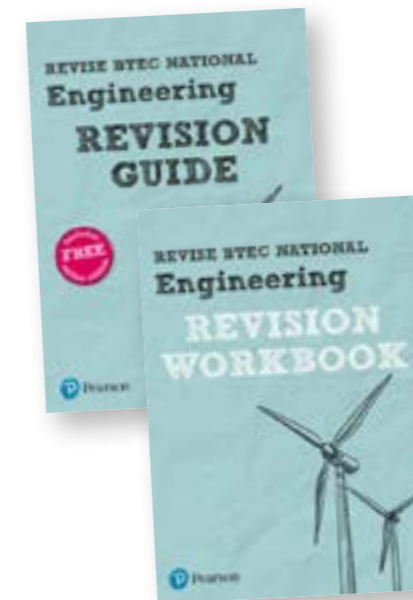
Teaching packs (via ActiveLearn Digital Service)

ActiveLearn
Digital Service

- Include online versions of each student book
- Provide continuous support through planning and delivery
- Include interactive activities, presentations and tools to structure lessons
- Delivered through our **ActiveLearn Digital Service** at www.pearsonfe.co.uk/ALDS

Revision guides and workbooks

- Help learners prepare for external assessment
- Revision Guide for classroom or independent study
- Revision Workbook to help learners to test their own knowledge and skills



Find out more

Download sample units and order evaluation copies at www.pearsonfe.co.uk/BTECNatsEngineering16Guide



MyBTEC

We know that as a teacher workload can be an issue, that's why to help you save time we have designed myBTEC, a unique free service that aims to reduce your admin workload.

What myBTEC can do for you:

- ⦿ **Saves you time** – for example when Internally Verifying an assignment brief, at least 50% of the questions are answered for you
- ⦿ **Reduces your workload** – for example your assessment plan is produced automatically from your assignment briefs in myBTEC
- ⦿ **Automatic grade tracking calculations**, so you know your students are on track
- ⦿ **Easily export and download all documents**, information and results
- ⦿ **Give you the complete visibility of all courses**, assessment, internal verification and results at your centre, so you can check progress at anytime.

Simply login at mybtec.pearson.com with your Edexcel online details.

Find out more
Discover myBTEC at
quals.pearson.com/myBTECNatsGuide17

The skills to succeed – the confidence to progress

Training

We offer a range of events to help you in every aspect of planning, teaching and assessing your BTEC courses.

To make it as easy as possible for you to benefit from our training, many of our **face-to-face** events are available as **online sessions**, and you can request any of our events to be delivered as paid-for events in your centre.

Our programme of events:

- ⦿ make it easy for you to access BTEC training **how, when and where** you need it.
- ⦿ offer **qualification-based** and **role-based** courses so you can choose which event is right for you.
- ⦿ are **delivered by experts** passionate about training.
- ⦿ provide opportunities to **share ideas and best practice**.

What's more, our flexible range of high quality training events not only support your delivery of BTEC courses, but also help towards your **continued professional development**.

Find out more

Book onto one of our events at quals.pearson.com/BTECNatsTraining



Admin support

New to BTEC?

If you're thinking about teaching BTEC Nationals and want to know more about what's involved and the support we can provide see our step-by-step guides at quals.pearson.com/stepbystepBTEC.

We've included guidance on:

- How to get started
- Building your BTEC team
- Quality assurance
- Internals assessment
- External assessment

Already teaching BTEC?

Remember you can find detailed information about key BTEC processes, forms and guidance materials quals.pearson.com/BTECsupport.

You'll also find all of the essential tools and forms on each of our dedicated qualifications pages, alongside your specifications and any additional resources specific to your BTEC.

Specialist help and advice

You've also access to specialist support and advice from our Engineering subject advisor, Evren Alibaba.

Evren will be happy to help with any questions you may have about your BTEC Level 3 Engineering qualifications.

Evren Alibaba

Engineering

📞 UK: 020 7010 2168

📞 Intl: +44 (0)20 7010 2168

✉️ TeachingEngineering@Pearson.com

🐦 [@PearsonTeachDT](https://twitter.com/PearsonTeachDT)



Find out More

For full details visit quals.pearson.com/BTECNatsEngineering16Guide

Assessment and Grading

Types of assessment

Your BTEC Level 3 Nationals Engineering qualifications take a unit-by-unit approach and offer a combination of assessment styles.

This gives your learners the opportunity to showcase their skills and apply their knowledge in an appropriate, work-related context, and provides evidence of what they can do when they apply to enter higher education or employment.

Assignments (internally assessed)

Set and marked by: Centre
Verified by: Pearson

Assignments are practical tasks set in work-related scenarios that can be tailored to local industry needs for your learners. Learners demonstrate how they apply knowledge and skills to complete a practical project over a period of time, working individually or in groups.

Tasks (externally assessed)

Set and marked by: Pearson

Tasks are practical work-related scenarios completed in realistic, time-based situations. They are completed in controlled conditions and tasks have pre-released information. Learners demonstrate how to apply learning to common workplace or HE scenarios. Tasks provide evidence of a consistent standard of assessment for all BTEC learners.

Written Exams (externally assessed)

Set and marked by: Pearson

For written exams, learners draw on essential information to create written answers to practical questions in exam conditions. Learners demonstrate they can apply appropriate knowledge to a work-related challenge in timed conditions.

Grading

A learner's final qualification grade reflects their achievements across units in their BTEC Nationals course.

Both internally and externally assessed units are individually graded, and each final unit grade is allocated points.

- Internally assessed units are marked and graded in the Centre (school, college or training provider) and subject to external verification by Pearson.
- Externally assessed units are marked and graded by Pearson.
- Units are graded Pass, Merit or Distinction, with external units also having a N grade in most Level 3 sectors. Total points scored across all units are used to calculate the final qualification grade.

Achievement of a Certificate with a D grade:

	GLH	Type (Int/Ext)	Grade	Unit points
Unit 1	90	Int	Distinction	24
Unit 2	90	Ext	Merit	22
Totals	180		D	46

Find out more

For full details see Section 9 of your specification

Download your specification at
quals.pearson.com/BTECNatsEngineering16Guide



We've also developed a range of new BTEC Engineering qualifications for Level 1 and Level 2 learners.



For Level 1 post-16 Learners

BTEC Level 1 Introductory qualifications

Graded, unit-based qualifications designed to develop transferable and sector skills so your **post-16 learners** can progress to further study, apprenticeships or training. BTEC Level 1 Introduction qualifications for Engineering sectors include:

Engineering

Vocational Studies

Find out more

Download your specifications at:
quals.pearson.com/BTECL1IntroGuide



For Level 2 post-16 learners

BTEC Level 2 Technicals

Designed to give **post-16 learners** real hands-on practical experience to master the skills they will need to succeed in their career or higher level study. Qualifications include:

Engineering

Find out more

Download your specifications and view all our BTEC Level 2 Technicals at:
quals.pearson.com/BTECL2TechnicalGuide


The skills to succeed – the confidence to progress

Your next Steps

1. Download your specifications and sample assessment materials at:
quals.pearson.com/BTECNatsEngineering16Guide
2. Order your paid-for resources at:
www.pearsonfe.co.uk/BTECNatsEngineering16Guide

Stay in touch

Sign up for updates at quals.pearson.com/BTECNats16UpdateGuide and we'll keep you up-to-date with the latest news.

 Follow us on Twitter
@teachBTEC
#ichooseBTEC

Help and advice

For help and advice about teaching your new qualifications contact our Subject Advisor for Engineering:

Evren Alibaba

Engineering

 UK: 020 7010 2168  Intl: +44 (0)20 7010 2168

 TeachingEngineering@Pearson.com

 @PearsonTeachDT