

apprenticeship FRAMEWORK

Improving Operational Performance (England)

IMPORTANT NOTIFICATION FOR ALL APPRENTICESHIP STARTS FROM 21 SEPTEMBER 2018

Modifications to SASE came into effect on 21 September 2018. Accordingly, SASE publication DFE-00236-2018 applies **both** to new Apprenticeship starts from 21 September 2018 **and** all Apprenticeships commenced before and not completed by 21 September 2018.

Latest framework version?

For any previous versions of this framework: https://acecerts.co.uk/framework_library

Issue date: 04 April 2018

Issued By:
SEMTA

Apprenticeship Certificates
England

https://acecerts.co.uk/framework_library

Document Status:
Issued



Improving Operational Performance

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Framework information

Information on the Issuing Authority for this framework:

SEMTA

The Apprenticeship sector for occupations in science, engineering and manufacturing technologies.

Issue number: 21	This framework includes:
Framework ID: FR04236	Level 2 <input checked="" type="checkbox"/> Level 3 <input type="checkbox"/> Level 4-7 <input type="checkbox"/>
Date this framework is to be reviewed by: 31/03/2019	This framework is for use in: England

Short description

The Improving Operational Performance framework incorporates three pathways (Performing Engineering Operations Level 2, Performing Manufacturing Operations Level 2 and Business Improvement Techniques Level 2) that equip apprentices with the basic skills and knowledge to carry out a range of engineering and manufacturing processes at semi-skilled and operator level. The Business Improvement Techniques pathway ensures that business processes are planned and executed as efficiently as possible, identifying and, minimising waste whilst ensuring the highest quality.

Contact information

Proposer of this framework

Semta has worked closely with its employers to define National Occupational Standards (NOS). From the NOS, qualifications such as NVQs and Technical Certificates have been developed that are suitable for use within this apprenticeship framework.

This framework was originally designed as the Industrial Applications Framework in the late 1990's. Further modification and development work took place on almost an annual basis until the introduction of the SASE in January 2011, when the framework was modified to include Pathway 3 - 'Business improvement Techniques'. Since then the framework has been reviewed by employers sitting on the relevant Semta Sector Skills Strategy Groups (SSGs), together with the National Forum of Engineering Centres (NFEC) representing SME's, GTA England and the Large Employer Group comprising: BAE Systems, GKN, Pepsico, Airbus, Jaguar Landrover, Siemens, Ford, Rolls Royce, Britvic, Pilkington and their supply chains.

This Improving Operational Performance (IOP) Apprenticeship at Level 2 will ensure that 16 to 25 year olds and post 25 year olds are given the appropriate skills, knowledge and understanding required in the workplace.

Developer of this framework

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Revising a framework

Why this framework is being revised

The framework is being revised to:

- remove QCF from qualification titles, as requested by Awarding Organisations
- remove competency and knowledge qualifications which are no longer available

NOTE

The following ERR qualification expires on the 30/04/2018 and will no longer be available to learners from 01/05/2018:

- Pearson BTEC Level 2 Award in WorkSkills for Effective Learning and Employment 501/1793/2

Summary of changes made to this framework

Pathway 2: Performing Manufacturing Operations (PMO)

- One competency qualification has been removed

Pathway 3: Business Improvement Techniques (BIT)

- One competency qualification has been removed
- One knowledge qualification has been removed

Qualifications removed

Pathway 2: Performing Manufacturing Operations

- PAA\VQSET Level 2 NVQ Diploma in Performing Manufacturing Operations (QCF) 501/0628/4

Pathway 3: Business Improvement Techniques (BIT)

- PAA\VQSET Level 2 NVQ Diploma in Business Improvement Techniques (QCF) 500/8354/5
- PAA\VQSET Level 2 Certificate in the Improvement of Business Performance (QCF) 600/4004/X

Qualifications added

None

Qualifications that have been extended

None

Purpose of this framework

Summary of the purpose of the framework

An Apprenticeship is a job with an accompanying skills development programme designed by employers in the sector. It allows the apprentice to gain technical knowledge and real practical experience, along with functional and personal skills, required for their immediate job and future career. These are acquired through a mix of learning in the workplace, formal off-the-job training and the opportunity to practice and embed new skills in a real work context. This broader mix differentiates the Apprenticeship experience from training delivered to meet narrowly focused job needs.

All apprentices commencing their apprenticeship must have an Apprenticeship Agreement between the employer and apprentice. This can be used to reinforce the understanding of the requirements of the apprenticeship.

On completion of the Apprenticeship the apprentice must be able to undertake the full range of duties, in the range of circumstances appropriate to the job, confidently and competently to the standard set by the industry.

Sector background

Engineering/manufacturing operators working as process, plant and machine operatives (Level 2 roles) account for 14% of total sector employment (approximately 167,000 people) in England and Wales. 6% of employers felt they had skills gaps in their operator workforce. These were put down to lack of experience, failure to train and develop staff, lack of motivation, and the inability of the workforce to keep up with change. Within the sector itself, technical, practical and job-specific skills were highlighted as the main skills gaps, with problem solving, team working and general communication skills being secondary.

The age profile of the current workforce presents a recruitment challenge as 11% of operators are aged 60 plus and 10% are aged under 24 years old. 9% of engineering/manufacturing employers have staff undertaking Apprenticeships. It is anticipated that there will be a net requirement for 4,700 operators (660 per annum) over the period 2010-2016 just to cover retirements.

Many companies questioned are introducing lean manufacturing and continuous improvement techniques in order to improve productivity and competitiveness. It is essential that these techniques be employed in the face of stiff international competition from places such as China and the Pacific rim who can undercut manufacturing costs in the UK due to lower wage rates. It is no coincidence that the highest performing companies in the UK are those that train their

employees in the latest business improvement techniques.

Between 1998 to 2007 Gross Value Added productivity (GVA) per employee in the engineering sector saw a significant improvement from £35,100 to £51,500 per employee, an increase of 47%. Similar productivity improvements will be needed in the manufacturing sector to ensure we remain internationally competitive.

The Improving Operational Performance framework, previously known as the Industrial Applications framework, has been available to train apprentices for twelve years and addresses the fundamental skills needs of a wide variety of engineering, manufacturing, assembly and process operators through the provision of two pathways, Performing Engineering Operations (PEO2) and Performing Manufacturing Operations (PMO2). In 2008/9 there were 1,200 starts on the framework and this seems to be a consistent annual figure.

The Performing Engineering Operations Level 2 pathway gives apprentices working in engineering a basic all-round grounding in engineering operations and techniques. The competence element is designed to be tailored to operations in any given specific engineering sub-sector. On completion they will be of semi-skilled status; typical job roles would include metal working operatives, plant and machine operatives, quality control, routine inspection and testing, production of parts using computer controlled equipment and basic maintenance activity. This pathway will also play an increasingly important role in the short term in providing potential engineering advanced apprentices at Level 3.

The Performing Manufacturing Operations Level 2 pathway focuses on training apprentices to operate effectively in a manufacturing environment. Typical job roles include assembly operations of electrical and electronic products, vehicles, aerospace, marine, metal goods and production of moulded products. Other roles include receiving and checking raw materials and sub assemblies, inspection, test and quality control.

The introduction of a third pathway, Business Improvement Techniques Level 2 (B-IT2), and the title change of the framework provides an industry standard programme centered on the proven tools and techniques of lean process and quality improvement activities. It is designed to support continuous improvement by promoting effective team working and developing lean skills across the wider workforce.

The B-IT2 NVQ is delivered by high-achieving lean process practitioners and is a down-to-earth, hands-on programme designed for operators in companies that have lean systems in place but are looking to engage the wider workforce in continuous improvement activities. It teaches them how to identify and eliminate waste, create flow and improve quality leading to greater efficiency and increased profitability. This programme will be essential in ensuring that UK companies can compete against strong international competition.

Aims and objectives of this framework (England)

The aim of this framework is to attract young people into the engineering manufacturing industry, and will provide apprentices with the skills, underpinning knowledge and transferable skills required to operate at operator or semi-skilled level in an engineering or manufacturing environment carrying out a wide variety of defined activities.

Further objectives are to:

- attract new people into the engineering/manufacturing sector from a diverse range of backgrounds to replace those who naturally leave the sector and those 11% who are 60+ who will retire sometime in the next 5 years
- develop more operators and semi-skilled people through the Intermediate Apprenticeship
- provide apprentices with the basic engineering and manufacturing skills, underpinning knowledge, business improvement tools and techniques to carry out operator and assembly roles in engineering and manufacturing
- provide a structured training programme to develop and upskill the workforce
- provide a Business Improvement Techniques (B-IT) pathway to benefit organisations across all sectors where there is a need to review business processes in order to identify and eliminate waste and to improve quality
- ensure apprentices can undertake engineering and manufacturing operations safely and effectively
- provide a range of pathways that meet engineering and manufacturing employers' needs
- improve overall operational performance through improving skills
- help improve recruitment and retention rates within the industry by offering appropriate career progression
- improve productivity rates and thus profitability (GVA per employee)
- tackle the diversity issue within the sector, especially under representation of women
- provide a basic introduction to engineering and manufacturing through the PEO2 route for apprentices wishing to become Advanced Apprentices at Level 3
- increase the overall level of participation in apprenticeship training from its current 9%
- increase the level of general literacy and numeracy
- tackle the carbon footprint by maximising efficiency and eliminating waste
- develop apprentices employability and skills making them more attractive to all employers whichever career they choose.

Entry conditions for this framework

The Level 2 Intermediate framework covers a range of occupations in three pathways. Employers wish to attract applicants who have an interest in working in an engineering or manufacturing industry, welcoming applicants from a diverse range of backgrounds and anticipate that they will have a wide range of experience, achievements and qualifications.

The Intermediate Apprenticeship in Improving Operational Performance (IOP) is suitable for applicants who have GCSEs grade D to E (new equivalent grades 3 to 2) or above including Maths, English and a Science. This is not a hard and fast rule but may vary according to the job role (operator or semi-skilled) and the suitability of individual applicants.

Employers would be interested in applicants who:

- have previous work experience in the sector or
- have completed a 14 to 19 Diploma in Engineering or Manufacturing or
- have GCSE's in English, Maths and Science (grade D to E or higher/new equivalent grade 2 or higher) or
- are keen and motivated to work in an engineering/manufacturing and/or process/quality improvement environment or
- are practically minded and want to work with their hands or
- are willing to undertake a course of training both on-the-job and off-the job and apply this learning in the workplace or
- have completed a Young Apprenticeship in Engineering or other related area or
- have a Welsh Baccalaureate (Welsh applicants) or
- have an interest in problem solving and organising activities or
- have completed tests in basic numeracy, literacy and communications skills and have spatial awareness.

The selection process on behalf of employers may include initial assessment where applicants will be asked if they have any qualifications or experience that can be accredited against the requirements of the apprenticeship. They may also be required to take tests in basic numeracy and literacy, communication skills and spatial awareness. There may also be an interview to ensure applicants have selected the right occupational sector to meet their needs and expectations and those of their employer and are motivated to become an apprentice, as undertaking an apprenticeship is a major commitment for both the individual and the employer.

Initial Assessment

Training providers/colleges and employers will use initial assessment to ensure that applicants have a fair opportunity to demonstrate their ability and to tailor programmes to meet individual

needs, recognising prior qualifications and experience.

Rules to avoid the need to repeat qualifications

To avoid the need to repeat qualifications, processes exist to ensure applicants with prior knowledge, qualifications and/or experience are not disadvantaged. Training Providers, Colleges and Awarding Organisations will be able to advise applicants on the current rules for accrediting prior learning (APL) and experience.

Where applicants have accredited prior learning then apprentices must be offered training which helps them to develop new skills and learning at a higher level.

Transferable skills

An Intermediate Apprenticeship framework specifies that an apprentice needs to achieve (or have achieved) acceptable qualifications at required minimum grades/levels.

From 6th April 2015 the "5 year rule" has been removed so acceptable qualifications, achieved before September 2012, are now in scope. This includes GCSEs, iGCSEs, A and AS Levels, O Levels and Key Skills.

Changes to the English and Maths minimum requirements for Apprenticeship starts from 22nd August 2017, and Apprenticeships remaining incomplete on 22nd August 2017, are summarised in the preface to this framework. This includes a wider range of exemption qualifications and the new equivalent numerically graded GCSEs. The equivalent grades are indicated in the Transferable Skills tables against GCSE requirements for each pathway, and the range of further exemption qualifications can be found at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/630068/Specification_of_Apprenticeship_Standards_for_England_.pdf

Knowledge qualifications

If applicants already have one of the knowledge qualifications or individual units at Level 2 before starting their apprenticeship (see knowledge qualifications page), they may count this and will not have to repeat the qualification providing they have achieved this qualification within five years of starting their apprenticeship. The hours that were spent gaining the qualification may be counted towards the total hours for the apprenticeship.

Competence qualifications

If applicants already have one of the Intermediate (Level 2) Competence Qualifications before starting their apprenticeship (see competence qualifications page) before starting their apprenticeship, they may count this and will not have to repeat the qualification providing they have achieved this qualification within five years of starting their apprenticeship. The hours that were spent gaining the competence qualification may be counted towards the total hours for the apprenticeship.

It is important however that there is agreement between the employer and the apprentice that the applicant is currently competent.

Prior experience in the sector

Applicants that are already working in the sector or who have recently worked in the sector at the appropriate level can apply to have their experience formally recognised by an Awarding Organisation and this could count towards the qualification(s) in this framework.

Level 2

Title for this framework at level 2

Intermediate Apprenticeship in Improving Operational Performance

Pathways for the framework at level 2:

- | | |
|------------|---|
| Pathway 1: | Intermediate Level in Performing Engineering Operations |
| Pathway 2: | Intermediate Level in Performing Manufacturing Operations |
| Pathway 3: | Intermediate Level in Business Improvement Techniques |

Level 2, Pathway 1: Intermediate Level in Performing Engineering Operations

Description of this pathway

Performing Engineering Operations Level 2 (all engineering sub-sectors) - total minimum credit value = 62 credits.

- *Competence = 40 credits*
- *Knowledge = 12 credits*
- *Transferable Skills = 10 credits*

Entry requirements for this pathway in addition to the framework entry requirements

There are no additional requirements other than the general entry conditions.

Job title(s)	Job role(s)
Metal working and Machine Operatives	Bending, punching, notching, shearing and cropping sheet metal fabrications
Quality Control (batch work)	Batch sampling of components or sub assemblies to identify if they are compliant to dimensional tolerances and material/functional integrity requirements
CNC Operator	Operation of Computer Numerically Controlled machines involved in batch production
Maintenance Operative	Ensuring plant equipment and manufacturing systems remain operational through preventative and on condition maintenance
Process Operator	Treatment of metal or plastic products electrolytically with chromium, zinc, copper, cadmium or other metal to provide protective or decorative surfaces or to build up worn surfaces

Qualifications

Competence qualifications available to this pathway

C1 - Level 2 NVQ Diploma in Performing Engineering Operations					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
C1a	600/9471/0	City & Guilds	40	214	N/A
C1b	600/8264/1	EAL	40	214	N/A
C1c	601/2547/0	Pearson	40	214	N/A
C1d	601/1785/0	PAA\QSET	40	214	N/A
C1e	601/1688/2	ETC Awards Ltd	40	214	N/A
C1f	603/0649/X	NOCN	40	214	N/A

Knowledge qualifications available to this pathway

K1 - EAL Level 2 Award in Industrial Environment Awareness					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K1a	500/6147/1	EAL	12	70	N/A

K2 - EAL Level 2 Diploma in Engineering Technology					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K2a	500/7595/0	EAL	39	330	N/A

K3 - City & Guilds Level 2 Certificate in Engineering

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K3a	600/0880/5	City & Guilds	35	300	N/A

K4 - City & Guilds Level 2 Certificate in Marine Construction, Systems Engineering and Maintenance

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K4a	600/2304/1	City & Guilds	32	280	N/A

K5 - City & Guilds Level 2 Diploma in Aircraft Engineering

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K5a	600/3409/9	City & Guilds	40	340	N/A

K6 - City & Guilds Level 2 Diploma in Engineering - Weapons Engineering Maintenance

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K6a	600/3167/0	City & Guilds	42	341	N/A

K7 - City & Guilds Level 2 Diploma in Aircraft Maintenance (Civil Aircraft)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K7a	600/1928/1	City & Guilds	56	485	N/A

K8 - ABC Level 2 Certificate in Fabrication and Welding Practice

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K8a	600/5190/5	ABC	31	260	N/A

K9 - City & Guilds Level 2 Diploma in Engineering

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K9a	600/0881/7	City & Guilds	42	360	N/A

K10 - EAL Level 2 Certificate in Positional Welding

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K10a	501/1807/9	EAL	23	170	N/A

K11 - EAL Level 2 Certificate in Metals Industries Processes

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K11a	500/7998/0	EAL	18	110	N/A

K12 - City & Guilds Level 2 Diploma in Engineering - Military Marine and Air Engineering

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K12a	600/2708/3	City & Guilds	42	295	N/A

K13 - Pearson BTEC Level 2 Extended Certificate in Engineering (Specialist: Manufacturing Engineering)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K13a	500/8270/X	Pearson	30	180	N/A

K14 - EAL Level 2 Diploma In Engineering Technology - Motorsport

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K14a	601/3375/2	EAL	59	340	N/A

K15 - EAL Level 2 Certificate in Engineering Technologies

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K15a	601/5670/3	EAL	25	230	N/A

K16 - EAL Level 2 Diploma in Engineering Technologies

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K16a	601/5669/7	EAL	39	330	N/A

K17 - ETCAL Level 2 Diploma in Engineering

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K17a	601/6008/1	ETC Awards Ltd	42	360	N/A

K18 - NOCN Level 2 Award in Awareness of the Industrial Environment

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K18a	600/0452/2	NOCN	12	96	N/A

K19 - EAL Level 2 Certificate in Cycle Maintenance

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K19a	603/0586/1	EAL	25	150	N/A

K20 - City & Guilds Level 2 Technical Certificate in Engineering

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K20a	603/0294/X	City & Guilds	36	360	N/A

K21 - ABC Level 2 Certificate in Fabrication and Welding Practice

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K21a	603/2243/3	ABC	26	230	N/A

Combined qualifications available to this pathway

N/A

Relationship between competence and knowledge qualifications

K1 - K21 provide underpinning knowledge for C1a - C1f

The designated technical certificates underpin the knowledge elements of the competence qualification in this pathway. The knowledge qualifications support key areas of technical knowledge development needed for apprentices in engineering and manufacturing industries to carry out their duties in a safe and efficient manner.

Employers have agreed that their apprentices should have access to a number of different technical knowledge qualifications that specify varying degrees of theoretical concepts required, including a broad range of mathematical, scientific and engineering manufacturing principles and processes.

Delivery methods for knowledge based qualifications may vary, from a conventional college based environment, to delivery through a combination of this and written/web-based/distance learning materials.

After completing the designated knowledge qualification apprentices should be able to:

- understand health and safety requirements
- be able to communicate in an engineering manufacturing environment
- be able to work effectively in an engineering manufacturing environment
- understand basic engineering manufacturing principles and processes.

Transferable skills (England)

Apprentices must complete, or have completed, one of the English transferable skills qualifications and one of the Mathematical transferable skills qualifications in order to successfully complete their Apprenticeship.

The list of acceptable qualifications may vary depending on the Apprentice's completion date of their Apprenticeship. Please check the qualifications that are acceptable for each Apprentice.

If Apprentices do not have acceptable evidence of the achievement of these mandatory qualifications, at the required grade/level, an Apprenticeship certificate cannot be awarded.

ENGLISH

For the current list of acceptable English qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASE](#) on the www.gov.uk website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACE](#) website.

Does this framework require English achievement above the minimum SASE requirement?

YES

If YES, please state the grade/level required for English:

Click here to enter text.

MATHS

For the current list of acceptable Maths qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASE](#) on the www.gov.uk website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACE](#) website.

Does this framework require Maths achievement above the minimum SASE requirement?

YES

If YES, please state the grade/level required for Maths:

Click here to enter text.

Inclusion of Information and Communications Technology (ICT)

Is ICT a framework requirement? **YES** **NO**

ICT

For the current list of acceptable ICT qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASE](#) on the www.gov.uk website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACE](#) website.

Does this framework require ICT achievement above the minimum SASE requirement

YES

If YES, please state the grade/level required for ICT:

[Click here to enter text.](#)

Progression routes into and from this pathway

Progression routes into this pathway

Entrants to this pathway are likely to primarily be school leavers who have completed their GCSE studies and in some cases relevant vocational activity such as a Diploma in Engineering, Pre-Apprenticeship programme or extended work experience. More specifically they may:

- have previous employment or work experience in the sector or
- have completed a 14 to 19 Diploma in Engineering or Manufacturing or
- have GCSE's in English, Maths and Science (grade D to E or higher/new equivalent grade 2 or higher) or
- are keen and motivated to work in the engineering/manufacturing industry or
- are practically minded and want to work with their hands or
- are willing to undertake a course of training both on-the-job and off-the job and apply this learning in the workplace or
- have completed a Young Apprenticeship or similar in Engineering or other related area or
- have a Welsh Baccalaureate (Welsh applicants) or
- have completed tests in basic numeracy, literacy and communications skills and have spatial awareness.

Other entrants may have experience from working in the sector in a manufacturing context, and are now seeking to become qualified by undertaking an apprenticeship programme.

Particular interest would be shown to those applicants who have had previous work experience or employment in the sector.

Progression routes from this pathway

It is likely that a significant number of Intermediate Apprentices will progress on completion of this pathway to the Advanced Apprenticeship in Engineering Manufacture at Level 3, as the full PEO is the preferred method of acquiring basic engineering skills among employers on this programme.

More generally, most ex-apprentices will start off by carrying out semi-skilled job roles within manufacturing and engineering (see job roles described for the pathway). It is likely that a period of consolidation will be required in these roles before progression can take place. Most will aspire to a combination of internal promotion within their companies to team leader or supervisor level, while at the same time this affords the opportunity to undertake Further Education qualifications or an Advanced Apprenticeship to upgrade their competence and knowledge to fully skilled status. The Advanced Apprenticeship offers a choice of 14 occupational sub-sectors such as aerospace, automotive, marine, electrical/electronics etc. This gives wide ranging opportunity.

The general nature of the Performing Engineering Operations Level 2 NVQ can also allow for apprentices to move between and across sectors.

To further assist apprentices plan their careers we recommend they visit the following websites:

www.apprenticeships.org.uk/types-of-apprenticeships/engineering-and-manufacturing-technologies.aspx

<https://nationalcareersservice.direct.gov.uk/advice/planning/jobfamily/Pages/manufactureandengineering.aspx>

Employee rights and responsibilities

There are two methods of achieving ERR as set out below

Method 1 - Qualifications

1a. EAL have produced a stand-alone qualification that covers all 9 outcomes of ERR requirements.

Qualification details:

EAL Level 2 Award in Employment Rights and Responsibilities for new Entrants into the Science, Engineering and Manufacturing Sectors 600/0290/6

Credit value: 5 credits

Guided learning hours: 41

1b. Pearson have produced a stand-alone qualification that can cover all 9 outcomes of ERR requirements if Unit 2 is achieved.

Qualification details:

Pearson BTEC Level 2 Award in WorkSkills for Effective Learning and Employment 501/1793/2

Credit value: 4 credits

Guided learning hours: 40

Please note: The Pearson BTEC Level 2 Award consists of a mandatory unit as an introduction to apprenticeships. Apprentices **must then complete Unit 2** which covers the ERR requirements (included within content). This qualification is designed to be assessed in the context of the sector relevant to the apprenticeship framework being undertaken (ie manufacturing/ engineering in this case).

This qualification expires on 30/04/2018 and will no longer be available to new starts from 01/05/2018

1c. City & Guilds have produced a stand-alone qualification that can cover all 9 outcomes of ERR requirements.

Qualification details:

City & Guilds Level 2 Subsidiary Award in Employment and Personal Learning at Work 600/2819/1

Credit value: 2 credits

Training hours: 15

1d. BIIAB have produced a stand-alone qualification that covers all 9 outcomes of ERR requirements.

Qualification details:

BIIAB Level 2 Award in Employment Rights and Responsibilities 601/4607/2

Credit value: 2 credits

Guided learning hours: 16

Please note: Although it may be possible to complete ERR in a minimum of 15 Guided learning hours (GLH), Semta recommend a minimum of 40 GLH are taken to complete the ERR requirements.

These qualifications will enable apprentices to both know and understand the principles associated with the nine national outcomes such as the world of work and how they are constrained by various legal and organisational procedures for their own well-being. Apprentices achieving the qualifications will have demonstrated that they have the underpinning knowledge relevant for the engineering/manufacturing environment which satisfies the Specification for Apprenticeship Standards for England.

Method 2 - Workbook

Semta has produced an Apprentice ERR workbook that is available from:
customercare@eal.org.uk

The requirements for completing it must be explained to the apprentice right at the start of their training in order that they may take full advantage of their *company induction where significant amounts of information towards the national outcomes will be covered. The workbook is intended to enable apprentices to know, understand and record the principles associated with the nine national outcomes such as the world of work and how they are constrained by various legal and organisational procedures for their own well-being.

***Please note:** All apprentices must receive a company induction programme.

To claim final certification of the apprenticeship, one of the preceding forms of ERR evidence will be required, together with the Apprentice Declaration and Authorisation form V3 which is available from the Federation for Industry Sector Skills and Standards (FISSS) website: acecerts.co.uk/

Certification Requirements for ERR

All providers and apprentices must complete the Apprenticeship Consent Form when claiming for the Apprentice's apprenticeship certificate. The universal form covers declarations for the apprentice to:

- confirm the existence of an Apprenticeship Agreement between themselves and their employer;

- confirm their achievement of all ERR requirements;
- confirm their achievement of all 6 PLTS;
- confirm that they have received at least the minimum levels of GLH set out in their framework and have undertaken training both on and off the job.

All apprentices must sign this form at the end of programme to give their authority for the claimant, named on the form, to make a claim, on their behalf, for their Apprenticeship completion certificate.

Level 2, Pathway 2: Intermediate Level in Performing Manufacturing Operations

Description of this pathway

Performing Manufacturing Operations Level 2 (all manufacturing sub-sectors) - total minimum credit value = 70 credits.

- Competence = 48 credits
- Knowledge = 12 credits
- Transferable Skills = 10 credits

Entry requirements for this pathway in addition to the framework entry requirements

There are no additional requirements other than the general entry conditions.

Job title(s)	Job role(s)
Manufacturing Process Operator	Sets and operates machines during production, plans and sets up the sequence of operations according to drawings, layouts and other instructions
Maintenance Operator	Ensures machines and equipment used for production are maintained and serviceable
Production Inspector	Inspects sub-assemblies or finished products for faults before the next phase of production or delivery to the customer
Assembly Operator	Assemble products using jigs and tools, could work in the following sectors: electrical, electronic, automotive, aviation, metal goods, marine etc.

Qualifications

Competence qualifications available to this pathway

C1 - Level 2 NVQ Diploma in Performing Engineering Operations					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
C1a	501/0928/5	EAL	48	216	N/A
C1b	501/1313/6	City & Guilds	48	216	N/A
C1c	501/0659/4	Pearson	48	216	N/A
C1d	601/2684/X	Highfield Qualifications	48	216	N/A
C1e	603/0300/1	NOCN	46	216	N/A
C1f	600/2923/7	ETCAL	46	216	N/A

Knowledge qualifications available to this pathway

K1 - EAL Level 2 Award in Industrial Environment Awareness					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K1a	500/6147/1	EAL	12	70	N/A

K2 - EAL Level 2 Diploma in Engineering Technology					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K2a	500/7595/0	EAL	39	330	N/A

K3 - City & Guilds Level 2 Certificate in Engineering

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K3a	600/0880/5	City & Guilds	35	300	N/A

K4 - Pearson BTEC Level 2 Certificate in Improving Performance for Manufacturing Engineering Operations

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K4a	600/3050/1	Pearson	13	90	N/A

K5 - EAL Level 2 Certificate in Metals Industries Processes

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K5a	500/7998/0	EAL	18	110	N/A

K6 - Pearson BTEC Level 2 Extended Certificate in Engineering (Specialist: Manufacturing Engineering)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K6a	500/8270/X	Pearson	30	180	N/A

K7 - City & Guilds Level 2 Certificate in Manufacturing Practices

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K7a	601/3036/2	City & Guilds	13	56	N/A

K8 - EAL Level 2 Certificate in Engineering Technologies

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K8a	601/5670/3	EAL	25	230	N/A

K9 - EAL Level 2 Diploma in Engineering Technologies

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K9a	601/5669/7	EAL	39	330	N/A

K10 - ETCAL Level 2 Diploma in Engineering

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K10a	601/6008/1	ETC Awards Ltd	42	360	N/A

K11 - ETCAL Level 2 Certificate In Manufacturing Practices

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K11a	601/7648/9	ETC Awards Ltd	13	56	N/A

K12 - NOCN Level 2 Award in Awareness of the Industrial Environment

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K12a	600/0452/2	NOCN	12	96	N/A

K13 - City & Guilds Level 2 Technical Certificate in Engineering

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K13a	603/0294/X	City & Guilds	36	360	N/A

Combined qualifications available to this pathway

N/A

Relationship between competence and knowledge qualifications

K1 - K13 provide underpinning knowledge for C1a - C1f

The designated technical certificates underpin the knowledge elements of the competence qualification in this pathway. The knowledge qualifications support key areas of technical knowledge development needed for apprentices in manufacturing industries to carry out their duties in a safe and efficient manner.

Employers have agreed that their apprentices should have access to a number of different technical knowledge qualifications that specify varying degrees of theoretical concepts required, including a broad range of mathematical, scientific and engineering manufacturing principles and processes.

Delivery methods for knowledge based qualifications may vary, from a conventional college based environment, to delivery through a combination of this and written/web-based/distance learning materials.

After completing the designated knowledge qualification apprentices should be able to:

- understand health and safety requirements
- be able to communicate in an engineering manufacturing environment
- be able to work effectively in an engineering manufacturing environment.

Transferable skills (England)

Apprentices must complete, or have completed, one of the English transferable skills qualifications and one of the Mathematical transferable skills qualifications in order to successfully complete their Apprenticeship.

The list of acceptable qualifications may vary depending on the Apprentice's completion date of their Apprenticeship. Please check the qualifications that are acceptable for each Apprentice.

If Apprentices do not have acceptable evidence of the achievement of these mandatory qualifications, at the required grade/level, an Apprenticeship certificate cannot be awarded.

ENGLISH

For the current list of acceptable English qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASE](#) on the www.gov.uk website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACE](#) website.

Does this framework require English achievement above the minimum SASE requirement?

YES

If YES, please state the grade/level required for English:

Click here to enter text.

MATHS

For the current list of acceptable Maths qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASE](#) on the www.gov.uk website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACE](#) website.

Does this framework require Maths achievement above the minimum SASE requirement?

YES

If YES, please state the grade/level required for Maths:

Click here to enter text.

Inclusion of Information and Communications Technology (ICT)

Is ICT a framework requirement? **YES** **NO**

ICT

For the current list of acceptable ICT qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASE](#) on the www.gov.uk website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACE](#) website.

Does this framework require ICT achievement above the minimum SASE requirement

YES

If YES, please state the grade/level required for ICT:

[Click here to enter text.](#)

Progression routes into and from this pathway

Progression routes into this pathway

Entrants to this pathway are likely to primarily be school leavers who have completed their GCSE studies and in some cases relevant vocational activity such as a Diploma in Engineering, Pre-Apprenticeship programme or extended work experience. More specifically they may:

- have previous employment or work experience in the sector or
- have completed a 14 to 19 Diploma in Engineering or Manufacturing or
- have GCSE's in English, Maths and Science (grade D to E or higher/new equivalent grade 2 or higher) or
- are keen and motivated to work in the engineering/manufacturing industry or
- are practically minded and want to work with their hands or
- are willing to undertake a course of training both on-the-job and off-the job and apply this learning in the workplace or
- have completed a Young Apprenticeship in Engineering or other related area or
- have a Welsh Baccalaureate (Welsh applicants) or
- have an interest in problem solving and organising activities or
- have completed tests in basic numeracy, literacy and communications skills and have spatial awareness.

Other entrants may have experience from working in the sector in a manufacturing context, and are now seeking to become qualified by undertaking an apprenticeship programme.

Particular interest would be shown to those applicants who have had previous work experience or employment in the sector, and are now seeking to become qualified by undertaking an apprenticeship programme.

Progression routes from this pathway

It is likely that a significant number of Intermediate Apprentices will progress on completion of this pathway to the Advanced Apprenticeship in Engineering Manufacture at Level 3, as this is the preferred method of acquiring basic manufacturing skills among employers.

More generally, most ex-apprentices will start off by carrying out semi skilled job roles within manufacturing (see job roles described for the pathway). It is likely that a period of consolidation will be required in these roles before progression can take place. Most will aspire to a combination of internal promotion within the company to team leader or supervisor level, while at the same time this affords the opportunity to undertake Further Education qualifications or an Advanced Apprenticeship to upgrade their competence and knowledge to fully skilled status. The Advanced Apprenticeship offers a choice of 14 occupational sub-sectors such as aerospace, automotive, marine, electrical / electronics etc. This gives wide ranging

opportunity.

The general nature of the Performing Manufacturing Operations Level 2 NVQ can also allow for apprentices to move between and across manufacturing sectors.

To further assist apprentices plan their careers we recommend they visit the following websites:

www.apprenticeships.org.uk/types-of-apprenticeships/engineering-and-manufacturing-technologies.aspx

<https://nationalcareersservice.direct.gov.uk/advice/planning/jobfamily/Pages/manufactureandengineering.aspx>

Employee rights and responsibilities

There are two methods of achieving ERR as set out below

Method 1 - Qualifications

1a. EAL have produced a stand-alone qualification that covers all 9 outcomes of ERR requirements.

Qualification details:

EAL Level 2 Award in Employment Rights and Responsibilities for new Entrants into the Science, Engineering and Manufacturing Sectors 600/0290/6

Credit value: 5 credits

Guided learning hours: 41

1b. Pearson have produced a stand-alone qualification that can cover all 9 outcomes of ERR requirements if Unit 2 is achieved.

Qualification details:

Pearson BTEC Level 2 Award in WorkSkills for Effective Learning and Employment 501/1793/2

Credit value: 4 credits

Guided learning hours: 40

Please note: The Pearson BTEC Level 2 Award consists of a mandatory unit as an introduction to apprenticeships. Apprentices **must then complete Unit 2** which covers the ERR requirements (included within content). This qualification is designed to be assessed in the context of the sector relevant to the apprenticeship framework being undertaken (ie manufacturing/ engineering in this case).

This qualification expires on 30/04/2018 and will no longer be available to new starts from 01/05/2018

1c. City & Guilds have produced a stand-alone qualification that can cover all 9 outcomes of ERR requirements.

Qualification details:

City & Guilds Level 2 Subsidiary Award in Employment and Personal Learning at Work 600/2819/1

Credit value: 2 credits

Training hours: 15

1d. BIIAB have produced a stand-alone qualification that covers all 9 outcomes of ERR requirements.

Qualification details:

BIIAB Level 2 Award in Employment Rights and Responsibilities 601/4607/2

Credit value: 2 credits

Guided learning hours: 16

Please note: Although it may be possible to complete ERR in a minimum of 15 Guided learning hours (GLH), Semta recommend a minimum of 40 GLH are taken to complete the ERR requirements.

These qualifications will enable apprentices to both know and understand the principles associated with the nine national outcomes such as the world of work and how they are constrained by various legal and organisational procedures for their own well-being. Apprentices achieving the qualifications will have demonstrated that they have the underpinning knowledge relevant for the engineering/manufacturing environment which satisfies the Specification for Apprenticeship Standards for England.

Method 2 - Workbook

Semta has produced an Apprentice ERR workbook that is available from:

customercare@eal.org.uk

The requirements for completing it must be explained to the apprentice right at the start of their training in order that they may take full advantage of their *company induction where significant amounts of information towards the national outcomes will be covered. The workbook is intended to enable apprentices to know, understand and record the principles associated with the nine national outcomes such as the world of work and how they are constrained by various legal and organisational procedures for their own well-being.

***Please note:** All apprentices must receive a company induction programme.

To claim final certification of the apprenticeship, one of the preceding forms of ERR evidence will be required, together with the Apprentice Declaration and Authorisation form V3 which is available from the Federation for Industry Sector Skills and Standards (FISSS) website: acecerts.co.uk/

Certification Requirements for ERR

All providers and apprentices must complete the Apprenticeship Consent Form when claiming for the Apprentice's apprenticeship certificate. The universal form covers declarations for the apprentice to:

- confirm the existence of an Apprenticeship Agreement between themselves and their employer;
- confirm their achievement of all ERR requirements;
- confirm their achievement of all 6 PLTS;

... Improving Operational Performance (England)
..... level 2
..... Pathway 2

- confirm that they have received at least the minimum levels of GLH set out in their framework and have undertaken training both on and off the job.

All apprentices must sign this form at the end of programme to give their authority for the claimant, named on the form, to make a claim, on their behalf, for their Apprenticeship completion certificate.

Level 2, Pathway 3: Intermediate Level in Business Improvement Techniques

Description of this pathway

Business Improvement Techniques Level 2 - total minimum credit value = 79 credits.

- **Competence = 56 credits**
- **Knowledge = 13 credits**
- **Transferable Skills = 10 credits**

Entry requirements for this pathway in addition to the framework entry requirements

There are no additional requirements other than the general entry conditions.

Job title(s)	Job role(s)
Materials Handler	Ensuring part-machined or assembled products are delivered at the right time and place for further machining or assembly operations. Delivery accuracy is key as well as taking waste out of material movements
B-IT Administration Operative	Office-based administration role involving continuous improvement of manufacturing processes leading to higher quality, reduced cost, and reduced lead times (delivery)
B-IT Quality Control Operative	Monitoring quality in the manufacturing process, generating statistical and graphic data to measure and ensure continuous quality improvement
B-IT Shopfloor Operative	Analyses assembly techniques to optimise the process, improving quality, cost and delivery

Qualifications

Competence qualifications available to this pathway

C1 - Level 2 NVQ Diploma in Business Improvement Techniques					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
C1a	500/6590/7	EAL	56	249	N/A
C1b	500/7473/8	City & Guilds	56	249	N/A
C1c	501/0585/1	Pearson	56	249	N/A
C1d	600/1821/5	NCFE	56	249	N/A
C1e	601/3200/0	Highfield Qualifications	56	249	N/A
C1f	601/4342/3	Future (Awards and Qualifications) Ltd	56	249	N/A
C1g	600/2259/0	ETC Awards Ltd	56	249	N/A
C1h	601/6634/4	BIIAB	56	249	N/A
C1i	603/0687/7	NOCN	56	249	N/A

Knowledge qualifications available to this pathway

K1 - EAL Level 2 Certificate in Business Improvement Techniques					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K1a	501/1495/5	EAL	18	102	N/A

K2 - Pearson BTEC Level 2 Certificate in Lean Organisation Management Techniques

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K2a	501/0020/8	Pearson	15	90	N/A

K3 - City & Guilds Level 2 Certificate in Improving Business Performance

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K3a	600/3741/6	City & Guilds	16	79	N/A

K4 - EAL Level 2 Certificate in Applying Business-Improvement Techniques

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K4a	601/1686/9	EAL	13	70	N/A

K5 - NCFE Level 2 Certificate in Lean Organisation Management Techniques

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K5a	601/2530/5	NCFE	15	90	N/A

K6 - Pearson BTEC Level 2 Extended Certificate in Engineering (Specialist: Manufacturing Engineering)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K6a	500/8270/X	Pearson	30	180	N/A

K7 - Highfield Level 2 Certificate in Lean Organisation Management Techniques

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K7a	601/3199/8	Highfield Qualifications	15	90	N/A

K8 - Highfield Level 2 Certificate in Business Improvement Techniques

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K8a	601/3198/6	Highfield Qualifications	18	102	N/A

K9 - City & Guilds Level 2 Certificate in Manufacturing Practices

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K9a	601/3036/2	City & Guilds	13	56	N/A

K10 - FAQ Level 2 Certificate in Business Improvement Techniques

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K10a	601/4341/1	Future (Awards and Qualifications) Ltd	18	102	N/A

K11 - ETCAL Level 2 Certificate in Business Improvement Techniques

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K11a	601/5526/7	ETC Awards Ltd	18	102	N/A

K12 - BIIAB Level 2 Certificate In Lean Organisation Management Techniques

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K12a	601/6602/2	BIIAB	15	90	N/A

K13 - NOCN Level 2 Certificate in Techniques for Lean Organisation Management

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K13a	603/1297/X	NOCN	15	120	N/A

Combined qualifications available to this pathway

N/A

Relationship between competence and knowledge qualifications

K1 - K13 provide underpinning knowledge for C1a - C1i

Both the Certificate in Business Improvement Techniques and the Certificate in Lean Organisation Management directly underpin the competence qualification in this pathway. These knowledge qualifications support key areas of technical knowledge development needed for apprentices in carrying out process or quality improvement activities safely and efficiently.

Employers have agreed that their apprentices should have access to a number of different technical knowledge qualifications that specify varying degrees of theoretical concepts required, including a broad range of manufacturing processes and procedures.

Delivery methods for knowledge based qualifications may vary, from a conventional college based environment, to delivery through a combination of this and written/web-based/distance learning materials.

After completing either of these knowledge qualifications apprentices should be able to:

- understand health and safety requirements
- work effectively in a team
- know the basic principles and processes of continuous improvement techniques
- apply workplace organisation techniques.

Transferable skills (England)

Apprentices must complete, or have completed, one of the English transferable skills qualifications and one of the Mathematical transferable skills qualifications in order to successfully complete their Apprenticeship.

The list of acceptable qualifications may vary depending on the Apprentice's completion date of their Apprenticeship. Please check the qualifications that are acceptable for each Apprentice.

If Apprentices do not have acceptable evidence of the achievement of these mandatory qualifications, at the required grade/level, an Apprenticeship certificate cannot be awarded.

ENGLISH

For the current list of acceptable English qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASE](#) on the www.gov.uk website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACE](#) website.

Does this framework require English achievement above the minimum SASE requirement?

YES

If YES, please state the grade/level required for English:

Click here to enter text.

MATHS

For the current list of acceptable Maths qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASE](#) on the www.gov.uk website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACE](#) website.

Does this framework require Maths achievement above the minimum SASE requirement?

YES

If YES, please state the grade/level required for Maths:

Click here to enter text.

Inclusion of Information and Communications Technology (ICT)

Is ICT a framework requirement? **YES** **NO**

ICT

For the current list of acceptable ICT qualifications and appropriate **minimum** grade/level requirements, please refer to the most recent version of [SASE](#) on the www.gov.uk website. Additional guidance materials can be found on the [Knowledge Base](#) section of the [ACE](#) website.

Does this framework require ICT achievement above the minimum SASE requirement

YES

If YES, please state the grade/level required for ICT:

Click here to enter text.

Progression routes into and from this pathway

Progression routes into this pathway

It is likely that there will be a mix of entrants into this pathway. Although some will be school leavers who have completed their GCSE studies and in some cases relevant vocational activity such as a Diploma in Manufacturing or other related activity, Pre-Apprenticeship programme or extended work experience - it is highly likely that older apprentices in the 18 to 24 age category and adults post 25 will also use this pathway, who have worked in a process driven context and are now considering an Intermediate Apprenticeship. Particular interest would be shown to those applicants who have had previous work experience or employment in the sector.

This pathway would particularly suitable for those people who are good at problem solving and enjoy organising activities.

Progression routes from this pathway

The purpose of this pathway is to enable BIT trained employees to make a contribution to the overall efficiency of their manufacturing or engineering business. The NVQ is about how to continuously improve the processes and procedures involved in carrying out work. It is likely that Intermediate Apprentices will progress on completion of this pathway to work in various aspects of the business to identify and eliminate waste, create flow and improve quality, leading to greater efficiency and increased profitability.

More generally, most ex-apprentices aspire to a combination of internal promotion within their company to team leader or supervisor level, while at the same time taking Further Education qualifications to augment their knowledge.

Some apprentices will go on to complete the Operations and Quality Improvement Advanced Apprenticeship Framework which has been produced in partnership with major employers and their supply chains to develop a pool of talent across the UK to support businesses to become more productive and remain competitive often in global markets. The Framework components set out the skills, knowledge and understanding employees will require in order to support businesses to identify and then deliver continuous and sustainable quality, cost, delivery improvements for existing or new products, processes and/or services. Typical job roles could include Business Improvement Co-ordinators, Lean Manufacturing Facilitators, Production Team Leaders and Six Sigma Quality and Reliability Co-ordinators.

To further assist apprentices plan their careers we recommend they visit the following websites:

www.apprenticeships.org.uk/types-of-apprenticeships/engineering-and-manufacturing-technologies.aspx

<https://nationalcareersservice.direct.gov.uk/advice/planning/jobfamily/Pages/manufactureandengineering.aspx>

Employee rights and responsibilities

There are two methods of achieving ERR as set out below

Method 1 - Qualifications

1a. EAL have produced a stand-alone qualification that covers all 9 outcomes of ERR requirements.

Qualification details:

EAL Level 2 Award in Employment Rights and Responsibilities for new Entrants into the Science, Engineering and Manufacturing Sectors 600/0290/6

Credit value: 5 credits

Guided learning hours: 41

1b. Pearson have produced a stand-alone qualification that can cover all 9 outcomes of ERR requirements if Unit 2 is achieved.

Qualification details:

Pearson BTEC Level 2 Award in WorkSkills for Effective Learning and Employment 501/1793/2

Credit value: 4 credits

Guided learning hours: 40

Please note: The Pearson BTEC Level 2 Award consists of a mandatory unit as an introduction to apprenticeships. Apprentices **must then complete Unit 2** which covers the ERR requirements (included within content). This qualification is designed to be assessed in the context of the sector relevant to the apprenticeship framework being undertaken (ie manufacturing/ engineering in this case).

1c. City & Guilds have produced a stand-alone qualification that can cover all 9 outcomes of ERR requirements.

Qualification details:

City & Guilds Level 2 Subsidiary Award in Employment and Personal Learning at Work 600/2819/1

Credit value: 2 credits

Training hours: 15

1d. BIIAB have produced a stand-alone qualification that covers all 9 outcomes of ERR requirements.

Qualification details:

BIIAB Level 2 Award in Employment Rights and Responsibilities 601/4607/2

Credit value: 2 credits

Guided learning hours: 16

Please note: Although it may be possible to complete ERR in a minimum of 15 Guided learning hours (GLH), Semta recommend a minimum of 40 GLH are taken to complete the ERR requirements.

These qualifications will enable apprentices to both know and understand the principles associated with the nine national outcomes such as the world of work and how they are constrained by various legal and organisational procedures for their own well-being. Apprentices achieving the qualifications will have demonstrated that they have the underpinning knowledge relevant for the engineering/manufacturing environment which satisfies the Specification for Apprenticeship Standards for England.

Method 2 - Workbook

Semta has produced an Apprentice ERR workbook that is available from:

customercare@eal.org.uk

The requirements for completing it must be explained to the apprentice right at the start of their training in order that they may take full advantage of their *company induction where significant amounts of information towards the national outcomes will be covered. The workbook is intended to enable apprentices to know, understand and record the principles associated with the nine national outcomes such as the world of work and how they are constrained by various legal and organisational procedures for their own well-being.

***Please note:** All apprentices must receive a company induction programme.

To claim final certification of the apprenticeship, one of the preceding forms of ERR evidence will be required, together with the Apprentice Declaration and Authorisation form V3 which is available from the Federation for Industry Sector Skills and Standards (FISSS) website: acecerts.co.uk/

Certification Requirements for ERR

All providers and apprentices must complete the Apprenticeship Consent Form when claiming for the Apprentice's apprenticeship certificate. The universal form covers declarations for the apprentice to:

- confirm the existence of an Apprenticeship Agreement between themselves and their employer;
- confirm their achievement of all ERR requirements;
- confirm their achievement of all 6 PLTS;

- confirm that they have received at least the minimum levels of GLH set out in their framework and have undertaken training both on and off the job.

All apprentices must sign this form at the end of programme to give their authority for the claimant, named on the form, to make a claim, on their behalf, for their Apprenticeship completion certificate.

The remaining sections apply to all levels and pathways within this framework.

How equality and diversity will be met

Semta recognises the training and business benefits of having apprentices from a wide variety of diverse backgrounds. We are committed to ensuring equality and diversity drives all aspects of apprentice selection and recruitment. Equal opportunity and diversity refers to the active elimination of unlawful or unfair discrimination against any person or group on the grounds of gender, race, colour, nationality, ethnic origin, religion, age, sexual orientation, marriage and civil partnership, pregnancy and maternity, political belief, disability and where appropriate, prison/offender background where this is deemed irrelevant.

Despite the encouraging numbers of both female participants and ethnic minorities on the 14 to 19 Engineering and Manufacturing Diplomas and Young Apprenticeship programmes, the Engineering sector still has a significant way to go to encourage women into engineering and manufacturing careers.

Semta wishes to make a Gender Equality Commitment. Semta has signed the United Kingdom Resource Centre (UKRC) CEO's charter in a bid to step up female recruitment in its key sectors and programmes. Due to impending skills gaps it is estimated that 187,000 people will be required to be recruited and trained between 2010-2016 within Semta's sectors of aerospace, automotive, bioscience, composites, electrical, electronics, maintenance, marine, mathematics, metals and engineered metal products, renewables and science.

The UKRC is the Government's leading body for advanced gender equality in science, engineering and technology (SET) and the CEO's charter is a formal commitment to the UKRC's agenda to challenge the under-representation of women in SET. Women make up 50% of the labour market, yet they make up less than 20% of the labour market in science, engineering and technology.

The UKRC believes that only a concerted effort by the SET industry will break down the gender barriers that exist in traditionally male-dominated environments and we want to be part of a new consensus which will create an inclusive working environment for women. The manufacturing industries in which this framework operates are traditionally dominated by a white, male workforce. However, faced with an aging workforce and the probability of skill shortages we must look to attract new entrants from a much more diverse recruitment pool. This means that all young people and adults considering engineering and manufacturing as a career are welcome.

Providers of apprenticeship training including employers must be able to demonstrate there are no overt or covert discriminatory practices in the selection and employment of apprentices this

can be demonstrated by the implementing of a Single Equality Scheme (SES). The new Equality Duty (part of the Single Equality Bill) introduced to the public sector requires all public sector bodies to produce a SES combining their current race, disability and gender schemes and should be recognised by all providers of apprenticeship training. The implementation of a SES demonstrates the organisation's commitment to equality and diversity by identifying new and improved ways of working to ensure the organisation is more efficient and effective in meeting the diverse needs of both staff and customers.

All those who recruit apprentices, be they colleges, training providers or employers, must comply with the Equality act of 2010 and apply the Equality and Diversity legislation taking full account of the following:

- The Sex Discrimination Act 1975 and Code of Practice
- The Race Relations Act 1976 and Code of Practice
- The Disability Discrimination Act 1995 and Code of Practice
- Employment Equality (Religion or Belief) Regulations 2003
- Employment Equality (Sexual Orientation) Regulations 2003
- Employment Equality (Age) Regulations 2006
- The Equality Act 2010

Providers of apprenticeship training and employers must also actively monitor equality of opportunity and diversity procedures and take positive action where necessary to ensure equal access and treatment for all. Apprenticeships must be seen as a vital route to encourage and facilitate long term change in the equality and diversity of the engineering industry, therefore entry conditions into this framework are extremely flexible. All effort should be made to increase the diversity of our apprentice population.

Download the guidance on the Equality Act here:

www.equalityhumanrights.com/advice-and-guidance/new-equality-act-guidance/

On and off the job guided learning (England)

Total GLH for each pathway

Evidence requirements for claiming an Apprenticeship Certificate

The Apprenticeships, Skills, Children and Learning Act (ASCL) was enacted in November 2010 and the new certification requirements came into force on the 13th April 2011. One of the key requirements of the Act is that only the Certifying Authority for England can issue apprenticeship certificates to successful apprentices in England.

In order to make this happen the Federation for Industry Sector Skills & Standards (Fiss) has been designated the Certifying Authority in England. Certification applications are made through the Apprenticeship Certificates England (ACE) on-line system.

Guided Learning hours

Semta recognises that all apprentices have different learning needs and some apprentices will require more Guided Learning Hours (GLH) while others will require less. We have outlined the GLH delivered to apprentices as set out in the GLH in the individual qualifications. This represents a typical apprentice with minimum experience in the sector, as specified by the Specification for Apprenticeship Standards for England (SASE).

Both on and off-the-job GLH must be clearly evidenced. This SASE requirement for on-the-job and off-the-job guided learning is intended to meet the requirement in section 27(2) (b) of the Apprenticeships, Skills, Children & Learning (ASCL) Act for on-the-job and off-the-job training.

Total GLH for each pathway is summarised below:

Intermediate Apprenticeship (Level 2) - Improving Operational Performance

Pathway 1: Performing Engineering Operations

The minimum pathway duration time for completion for apprentices age 16 years to 18 years is 12 months

Total minimum credit value: 62 credits

Total GLH = 477 hours

- Competence = 214 minimum hours/ 40 minimum credits
- Knowledge = 70 minimum hours (smallest technical certificate) / 12 minimum credits
- *Functional Skills (notional value 45 hours x 2 = 90 hours /10 credits)
- Mentoring 48 weeks x 1 hour/week = 48 hours
- PLTS = 40 minimum hours
- ERR = 15 minimum hours

*Functional skills: Intermediate Apprentices who already have functional skills at level 1 should be encouraged to achieve level 2

Year 1 = 477 Hours Year 2 Nil

Pathway 2: Performing Manufacturing Operations

The minimum pathway duration time for completion for apprentices age 16 years to 18 years is 12 months

Total minimum credit value: 70 credits

Total GLH = 465 hours

- Competence = 216 minimum hours/48 minimum credits
- Knowledge = 56 minimum hours (based on the smallest technical certificate GLH)
- Knowledge = 12 minimum credits (based on the smallest technical certificate credit)
- *Functional Skills (notional value 45 hours x 2 = 90 hours /10 credits)
- Mentoring 48 weeks x 1 hour/week = 48 hours
- PLTS = 40 hours
- ERR = 15 hours

*Functional skills: Intermediate Apprentices who already have functional skills at level 1 should be encouraged to achieve level 2

Year 1 = 465 hours Year 2 Nil

Pathway 3: Business Improvement Techniques

The minimum pathway duration time for completion for apprentices age 16 years to 18 years is 12 months

Total minimum credit value: 79 credits

Total GLH = 498 hours

- Competence = 249 minimum hours/56 minimum credits
- Knowledge = 56 minimum hours (based on the smallest technical certificate GLH)

- Knowledge = 13 minimum credits (based on the smallest technical certificate credit)
- *Functional Skills (notional value 45 hours x 2 = 90 hours/10 credits)
- Mentoring 48 weeks x 1 hour/week = 48 hours
- PLTS = 40 minimum hours
- ERR = 15 minimum hours

*Functional skills: Intermediate Apprentices who already have functional skills at level 1 should be encouraged to achieve level 2

Year 1 = 498 hours Year 2 Nil

Minimum off-the-job guided learning hours

Below are the minimum off-the-job guided learning hours for:

Pathway 1: Performing Engineering Operations

Minimum off-the-job hours through pathway 1 is 263 GLH, and is evidenced by completion of the knowledge element, Functional skills, Employee Rights and Responsibilities (ERR), PLTS and Mentoring.

This amounts to 55% of the total pathway GLH.

Pathway 2: Performing Manufacturing Operations

Minimum off-the-job hours through pathway 2 is 249 GLH, and is evidenced by completion of the knowledge element, functional skills, Employee Rights and Responsibilities (ERR), PLTS and Mentoring.

This amounts to 54% of the total pathway GLH.

Pathway 3: Business Improvement Techniques

Minimum off-the-job hours through pathway 3 is 249 GLH, and is evidenced by completion of the knowledge element, functional skills, Employee Rights and Responsibilities (ERR), PLTS and Mentoring.

This amounts to 50% of the total pathway GLH.

How this requirement will be met

Off-the-job learning needs to:

- achieve clear and specific outcomes which contribute directly to the successful achievement of the framework and this may include accredited and non-accredited elements of the framework
- be planned, reviewed and evaluated jointly between the apprentice and a tutor, teacher, mentor or manager
- allow the apprentice access as, and when required to tutors, teachers, mentor(s) or manager
- be delivered through one or more of the following methods: individual and group tutoring, e-learning, distance learning, coaching, mentoring, feedback and assessment, collaborative/networked learning with peers or directed study.

Providers will not be required to record individual on and off-the-job Guided Learning Hours (GLH). However for certification purposes, the provider will be required to declare that the apprentice has completed the on and off-the-job GLH requirement as set out in this Apprenticeship framework.

GLH delivered under an apprenticeship agreement may vary depending on the previous experience and attainment of the apprentice. The amount of off-the-job training required to complete the apprenticeship under the apprenticeship agreement may then be reduced accordingly, provided the total number of off-the-job hours for this framework can be verified for apprenticeship certification.

Previous attainment

Where an apprentice enters an apprenticeship agreement having previously attained parts or all of the relevant qualifications, this prior learning needs to be recognised using the process of Recognition of Prior Learning (RPL) where appropriate.

For apprentices who have already achieved the relevant qualifications, they must have been certificated within 5 years of applying for the Intermediate Apprenticeship or Apprenticeship Certificate.

Previous experience

Where an apprentice enters an apprenticeship agreement with previous work-related experience, this prior learning needs to be recognised. To count towards apprenticeship certification, previous experience must be recorded using the appropriate Awarding Organisation's 'Recognition of Prior Learning' procedures and the hours recorded may then count towards the off-the-job hours required to complete the apprenticeship.

For apprentices with prior uncertificated learning experience, they must have been continuously employed in the relevant job role in the industry for five years duration.

Apprentices following the three pathways will receive off-the-job learning via a combination of activities such as the Underpinning Knowledge (Technical Certificate), Functional skills, Employee Rights and Responsibilities (ERR) and Personal Learning and Thinking Skills (PLTS).

The Technical Certificate may be delivered either by day or block release or a combination of the two at a local Training Provider or College of FE or delivered on the employers premises (away from the immediate pressures of the workplace). There may also be a need for self study according to the Training Providers, Colleges or Awarding Organisations arrangements.

Functional skills delivery methods vary widely, however all methods should start with initial/early assessment of a learner's functional skills, personalised learning should be based on assessing performance to date in order to inform and shape the next step in learning for that individual or group of individuals. Functional skills are externally assessed and candidates need to be prepared in order to take the tests, again methods of preparation vary but the preferred method seems to be an intensive off-the-job coaching period where candidates are taught the techniques required to undertake previous test papers to become proficient.

Employee Rights and Responsibilities (ERR) will be delivered as per the guidance in the ERR section of this framework. It is important that all new apprentices receive a comprehensive induction programme on joining their companies and that they are aware of the evidence opportunities this presents to complete significant areas of the ERR requirements.

All three key elements will be delivered by a combination of group-based delivery and self-study. These in combination exceed the 100 GLH / 30% rule as defined in the SASE (19. Section 27-1 SASE). In addition there will be a company induction, group delivery of PLTS requirements (prior to each apprentice starting to record their PLTS) and it is recommended that a mentor should be appointed for each apprentice to review their progress on a regular basis. All of these activities will take place off-the-job.

The Technical Certificate, Functional skills, and Employee Rights and Responsibilities will be formally delivered by the training provider/college staff in accordance with the awarding organisation's delivery and assessment guidance. This process is regulated and quality assured by Ofqual and Ofsted. PLTS will be delivered as described within its section.

Inclusion of Technical Certificates in the Apprenticeship Framework pathway

Working closely with a number of stakeholders including employers and awarding organisations, we have ensured that employers and apprentices have access to a range of technical certificates across a number of awarding organisations.

Whilst Awarding Organisation partners have ensured that each of the technical knowledge qualification in the pathway delivers, via a core and options approach, the minimum knowledge and understanding requirements for all the (job roles) selected in the appropriate NVQ. Employers have also demanded that they and apprentices have access to a number of different technical knowledge qualifications that specify varying degrees of theoretical concepts required in the manufacturing sectors including maths, scientific and engineering/manufacturing principles.

The different sizes (credit value and GLH) of the technical knowledge qualifications reflects the varying degree in the complexity, breadth and depth of the skills, knowledge, understanding and theoretical concepts required in the manufacturing sectors.

The benefits of this approach for both the employer and apprentices is that they can select the most appropriate qualification that meets the business requirements but also recognises the potential progression opportunities both in company including access to further and higher education and the career aspirations and abilities of the apprentice.

The providers of the technical knowledge qualification in partnership with the apprentice and employer could take the following into account and/or undertake further diagnostic assessments to ensure that the apprentice is enrolled on the most appropriate technical qualification:

- the career aspirations of the Apprentice
- the skill and knowledge requirements of the employer for the selected manufacturing occupational area (job role). The employer may have recruited the apprentice based on a workforce planning tool including succession planning
- an assessment of the academic qualifications achieved by the apprentice prior to undertaking the Intermediate Apprenticeship to determine if the apprentice will have the ability to achieve one of the more academically demanding technical knowledge qualifications
- the results of any psychometric tests that would ascertain whether the apprentice will be able to achieve one of the more academically demanding technical knowledge qualifications
- the preferred learning style of the apprentice including the various assessment methodologies used by the different Awarding Organisations
- custom and practice within the Sector, including any legislation requirements
- local and/or national Trade Union agreements

Minimum on-the-job guided learning hours

Below are the minimum on-the-job guided learning hours specified for:

Intermediate Apprenticeship (Level 2) - Improving Operational Performance

Pathway 1 - Performing Engineering Operations

Minimum on-the-job through pathway 1 is 214 GLH and is evidenced by completion of the Level 2 NVQ Diploma in Performing Engineering Operations

Pathway 2 - Performing Manufacturing Operations

Minimum on-the-job through pathway 2 is 216 GLH and is evidenced by completion of the Level 2 NVQ Diploma in Performing Manufacturing Operations

Pathway 3 - Business Improvement Techniques

Minimum on-the-job through pathway 3 is 249 GLH and is evidenced by completion of the Level 2 NVQ Diploma in Business Improvement Techniques

How this requirement will be met

On-the-job Delivery

Assessment of the units in the competency qualification should be carried out in line with the 'Common Requirements for National Vocational Qualifications (NVQ)' which can be downloaded from Semta's website.

Additional assessment requirements have been published by Semta. These additional assessment requirements are set down in Semta's Engineering NVQ unit assessment strategy which can also be downloaded from Semta's website. See:

- Assessment strategy for PEO - <http://semta.org.uk/pdf/Performing-Engineering-Operations-NVQ-Level-1-and-2.pdf>
- Assessment strategy for PMO - <http://www.semta.org.uk/pdf/PMO-Level-1-and-2-QCF-UAS-V2-1st-January-2011.pdf>
- Assessment strategy for B-IT - [http://semta.org.uk/pdf/Business-Improvement-Techniques-\(B-IT\)-NVQ-Level-2-3-and-4.pdf](http://semta.org.uk/pdf/Business-Improvement-Techniques-(B-IT)-NVQ-Level-2-3-and-4.pdf)

All apprentices are required to generate evidence in the workplace to demonstrate completion of the competence qualification, this may be through:

- apprentices generating a portfolio to record evidence of unit completion in accordance with the Awarding Organisations requirements and this will be regularly reviewed by the assessor and mentor. A period of one hour per week has been set aside for mentors to review the ongoing progress of their apprentice

or

- apprentices generating portfolio evidence based on jobs undertaken will need to get this signed as having been completed by a responsible work colleague. This is then examined and agreed by the assessor as a contribution to demonstrating competence in the workplace.

Generation of portfolio evidence may be paper based or electronic with other mediums such as video evidence. Evidence may be gathered throughout the whole apprenticeship period.

It is also important that:

- progress towards completion of the competence qualification should be planned, reviewed and evaluated jointly between the apprentice and an appointed mentor or manager
- apprentices should receive regular reviews from the mentor and assessor in order to ensure they remain on target to complete the competence qualification in the allocated time
- the apprenticeship is delivered during normal contracted working hours

Examples of on-the-job guided learning in an engineering/manufacturing or process/quality improvement context might be:

- environmental awareness
- employability skills
- team working and communications
- task specific workplace instructions or team briefings
- taught sessions by the workplace line manager/instructor
- induction where activities are covered within normal work duties
- coaching of learners.

Training providers or colleges should also keep detailed records performance reviews, mentoring, assessment of competence, the building of portfolios, keeping diaries/logs, peer review discussions.

Certification Requirements for GLH

All providers and apprentices must complete the Apprenticeship Consent Form when claiming for the apprentice's Apprenticeship certificate. The universal form covers declarations for the apprentice to:

- confirm the existence of an Apprenticeship Agreement between themselves and their employer;
- confirm their achievement of all ERR requirements;
- confirm their achievement of all 6 PLTS;
- confirm that they have received at least the minimum levels of GLH set out in their framework and have undertaken training both on and off the job.

All apprentices must sign this form at the end of programme to give their authority for the claimant, named on the form, to make a claim, on their behalf, for their Apprenticeship completion certificate.

Personal learning and thinking skills assessment and recognition (England)

Summary of Personal Learning and Thinking Skills

Personal Learning and Thinking Skills (PLTS) comprise of six skill areas that are essential to being successful in an apprenticeship.

There are two methods of evidencing the completion of PLTS within this framework.

Method 1 - Qualifications

1a. EAL have produced a stand-alone qualification that covers all 6 skill areas of PLTS.

Qualification details:

EAL Level 2 Award in Personal Learning and Thinking Skills for New Entrants into the Science, Engineering and Manufacturing Sectors 600/2019/2

Credit value: 6 credits

Guided learning hours: 60

1b. Pearson have produced a stand-alone qualification that can cover all 6 skill areas of PLTS if Units 7, 8 and 9 are achieved

Qualification details:

Pearson BTEC Level 2 Award in WorkSkills for Effective Learning and Employment 501/1793/2

Credit value: 4 credits

Guided learning hours: 40

Please note: The Pearson BTEC level 2 Award qualification consists of a mandatory unit as an introduction to apprenticeships. Apprentices **must then complete Units 7, 8 and 9** to cover all the PLTS which are mapped in grids at the end of each unit. This qualification is designed to be assessed in the context of the sector relevant to the apprenticeship framework being undertaken (ie manufacturing/engineering in this case).

This qualification expires on 30/04/2018 and will no longer be available to new starts from 01/05/2018

Method 2 - Workbook

Apprentices or training providers may download the Semta PLTS Evidence Recording

Document available from the Semta website: <http://semta.org.uk/>

This document will be used to record the apprentices PLTS evidence from the most naturally occurring location, such as the knowledge or competency qualifications, or Functional skills and ERR components of the framework.

To claim final certification of the apprenticeship, one of the following forms of PLTS completion evidence will be required:

- a qualification certificate for the EAL Level 2 Award in Personal Learning and Thinking Skills for new Entrants into the Science, Engineering and Manufacturing Sectors

or

- a qualification certificate for Pearson BTEC Level 2 Award in WorkSkills for Effective Learning and Employment **which must include achievement of Units 7, 8 and 9**

or

- a completed and countersigned Semta PLTS evidence recording document

All apprentices will need to receive guidance on what PLTS are and how they will need to provide evidence for all 6 PLTS areas as detailed below. They will need to understand those aspects of each skill area as defined in the bullet points below and be able to identify opportunities to practice and evidence these skills within their apprenticeship.

The PLTS areas are interconnected so it is likely that apprentices will encounter skills from several areas in any one learning experience. For example, when an apprentice works to improve their own and team practice in the workplace they will have demonstrated team working (collaborate with others to work towards common goals), effective participator (identify improvements that would benefit others as well as themselves) and self manager skills (work towards goals, showing initiative, commitment and perseverance).

Lecturers and/or assessors will be expected to check individual apprentices' progress in using and recording PLTS.

Certification Requirements for PLTS

- All providers and apprentices must complete the Apprenticeship Consent Form when claiming for the apprentice's Apprenticeship certificate. The universal form covers declarations for the apprentice to:
- confirm the existence of an Apprenticeship Agreement between themselves and their employer;
 - confirm their achievement of all ERR requirements;
 - confirm their achievement of all 6 PLTS;
 - confirm that they have received at least the minimum levels of GLH set out in their framework and have undertaken training both on and off the job.

All apprentices must sign this form at the end of programme to give their authority for the claimant, named on the form, to make a claim, on their behalf, for their Apprenticeship completion certificate.

Creative thinking

People think creatively by generating and exploring ideas, making original connections. They try different ways to tackle a problem, working with others to find imaginative solutions and outcomes that are of value.

To demonstrate these skills, behaviours and personal qualities, apprentices should:

- Generate ideas and explore possibilities;
- Ask questions to extend their thinking;
- Connect their own and others' ideas and experiences in inventive ways; Question their own and others' assumptions;
- Try out alternatives or new solutions and follow ideas through; Adapt ideas as circumstances change.

Independent enquiry

People process and evaluate information in their investigations, planning what to do and how to go about it. They take informed and well-reasoned decisions, recognising that others have different beliefs and attitudes.

Skills, behaviours and personal qualities for apprentices:

- Identify questions to answer and problems to resolve;
- Plan and carry out research, appreciating the consequences of decisions; Explore issues, events or problems from different perspectives;
- Analyse and evaluate information, judging its relevance and value;
- Consider the influence of circumstances, beliefs and feelings on decisions and events; Support conclusions, using reasoned arguments and evidence.

Reflective learning

People evaluate their strengths and limitations, setting themselves realistic goals with criteria for success. They monitor their own performance and progress, inviting feedback from others and making changes to further their learning.

To demonstrate these skills, behaviours and personal qualities, apprentices should:

- Assess themselves and others, identifying opportunities and achievements;
- Set goals with success criteria for their development and work;
- Review progress, acting on the outcomes;
- Invite feedback and deal positively with praise, setbacks and criticism; Evaluate experiences and learning to inform future progress;
- Communicate their learning in relevant ways for different audiences.

Team working

People work confidently with others, adapting to different contexts and taking responsibility for their own part. They listen to and take account of different views. They form collaborative relationships, resolving issues to reach agreed outcomes.

To demonstrate these skills, behaviours and personal qualities, apprentices should:

- Collaborate with others to work towards common goals;
- Reach agreements, managing discussions to achieve results;
- Adapt behaviour to suit different roles and situations, including leadership roles; Show fairness and consideration to others;
- Take responsibility, showing confidence in themselves and their contribution;
- Provide constructive support and feedback to others.

Self management

People organise themselves, showing personal responsibility, initiative, creativity and enterprise with a commitment to learning and self-improvement. They actively embrace change, responding positively to new priorities, coping with challenges and looking for opportunities.

To demonstrate these skills, behaviours and personal qualities, apprentices should:

- Seek out challenges or new responsibilities and show flexibility when priorities change;
- Work towards goals, showing initiative, commitment and perseverance;
- Organise time and resources, prioritising actions;
- Anticipate, take and manage risks;
- Deal with competing pressures, including personal and work-related demands;
- Respond positively to change, seeking advice and support when needed;
- Manage their emotions, and build and maintain relationships.

Effective participation

People actively engage with issues that affect them and those around them. They play a full part in the life of their school, college, workplace or wider community by taking responsible action to bring improvements for others as well as themselves.

To demonstrate these skills, behaviours and personal qualities, apprentices should:

- Discuss issues of concern, seeking resolution where needed;
- Present a persuasive case for action;
- Propose practical ways forward, breaking these down into manageable steps;
- Identify improvements that would benefit others as well as themselves;
- Try to influence others, negotiating and balancing diverse views to reach workable solutions;
- Act as an advocate for views and beliefs that may differ from their own.

apprenticeship **FRAMEWORK**

For more information visit-
www.acecerts.co.uk/framework_library