apprenticeship
FRAMEWORK

Polymer Processing Operations (Wales)

Issued by
Cogent

apprenticeship
FRAMEWORKS ONLINE
www.apprenticeshipframeworksonline.semta.org.uk

Document status:
Work in progress

Prentisiaethau Apprenticeships

Polymer Processing Operations (Wales)

Information on the Issuing Authority for this framework:

Cogent

The Apprenticeship sector for occupations in chemical manufacturing, nuclear science, oil and gas extraction (also includes process technology, bioscience, polymer and sign making).

Issue number: 1	This framework includes:
Framework ID: FR00393	Level 2 Level 3
Date this framework is to be reviewed by: 18/07/2011	This framework is for use in: **Wales**

Short description

The Polymer Processing Operations Apprenticeship Framework provides work based training for young people and adults to undertake key technical and operational roles in the Polymer Processing Industries.

There are two levels of Apprenticeship contained in this framework:
• The Foundation Apprenticeship (Level 2) in Polymer Processing Operations (Usually takes 12 months to complete)
• The Apprenticeship (Level 3) in Polymer Processing Operations (Usually takes 24 to 36 months to complete)

The framework contains details of vocational qualifications, knowledge based technical qualifications, Essential Skills (Communication, Application of Number, Information Technology) and employee rights and responsibilities required for an apprenticeship in Polymer Processing Operations.

Apprentices undertake training on-the-job at their workplace and off-the-job usually delivered by a local training provider or Further Education College.

Contact information

Proposer of this framework

(no information)

Developer of this framework

Name:	Ian Lockhart
Organisation:	Cogent Sector Skills Council
Organisation type:	Sector Skills Council
Job title:	Apprenticeship Manager
Phone:	01925 515223
Email:	ian.lockhart@cogent-ssc.com
Postal address:	Unit 5 Mandarin Court Centre Park Warrington WA1 1GG
Website:	cogent-ssc.com

Issuing Authority's contact details

Issued by:	Cogent
Issuer contact name:	James Murdock
Issuer phone:	01925 515200
Issuer email:	apprenticeships@cogent-ssc.com

Purpose of this framework

Summary of the purpose of the framework

This Apprenticeship Framework has been designed to meet the requirements for the type of work undertaken in the polymer processing industries. Polymer processing deals with the manufacture and production of polymer and synthetic substances such as plastic, nylon and PVC. Plastic is incredibly versatile and can be made from different ingredients, moulded into any shape, and put to a huge range of uses across industry and the rest of society, from carrier bags to electrical cables. It's no surprise that the polymer industry is one of the most important areas of manufacturing in the UK. One factory is likely to produce many different kinds of plastic items.

An apprentice would normally work in either a factory or workshop and learn how to mass-produce plastic or composite items. They would weigh and mix raw materials; learn about the production process; test products; maintain machinery; and make sure items are made on time and without wasting materials. Such is the diverse nature of the products manufactured, apprentices may find that they will be required to manufacture some products or components by hand-based methods.

Production requires practical skills, that will require the apprentice to work quickly on complicated tasks, use numeracy skills to mix materials, and need an eye for detail.

Polymer companies tend to be clustered around Cardiff, Newport and Swansea in the south and along the North Wales coast and around Wrexham.

Job Roles
- Process Setter/ Operator
- Quality Control Inspector
- Finishing & Assembly Operative
- Process Operator/ Technician

Aims and objectives of this framework (Wales)

Aim
To provide a skilled technical workforce for the polymer processing operations Industries that will enable them to compete in a global market.

The objectives of this framework are:
1. To provide the skilled operators and technicians to meet future demand forecasted by the polymer processing operations industries.

2. To provide a structured training framework that will provide the skills needed to operate, control and maintain polymer processing plant and equipment.

3. To provide a development framework for existing staff in the polymer processing operations industries to up-skill their current vocational skills and knowledge that will enable them to meet the future challenges of new technologies and changing production processes.

4. To provide progression opportunities for apprentices both within the polymer processing operations industries and employment in other sectors as well as for those wishing to engage in further study in Further or Higher Education.

5. To attract new talent into the polymer processing operations industries from a range of backgrounds, in order to meet industry requirements.

Entry conditions for this framework

Apprenticeship applicants will be expected to attend an interview with the employer/ training provider to assess their suitability for entry on to the framework. The interview provides an opportunity to talk directly to the applicant and discuss an individual's previous learning and experience. From this interview the employer will be able to decide whether a candidate is suitable using some of the following guidance.

Foundation Apprenticeship
The Polymer Processing Operations Foundation Apprenticeship is open to all people aged 16 or over. Due to the competition for places the following skills and attributes relevant to working within the polymer processing industries may be considered as part of the application process;
- motivation to succeed within industry
- an awareness of the demands of the Apprenticeship
- willingness to comply with employer/training provider terms and conditions of employment
- have the ability to apply learning in the workplace
- willingness to work with due regard to Health and Safety of self and others
- effective communication with a range of people.

The following examples of evidence can be used to support some of the above statements, such as;

• previous work experience or employment or
• voluntary or community based work or
• achievement of GCSEs (A*-E) or equivalent qualifications in Maths, English, Science and Design & Technology or
• achievement of the Welsh Baccalaureate (Foundation/ Intermediate Diploma) Principal Learning in Engineering or Manufacturing & Product Design or
• achievement of Awards, Certificates or Diplomas in a related industry such as Science or Engineering or
• proof of completion of non-accredited courses.

Apprenticeship

The Polymer Processing Operations Apprenticeship is open to all people aged 16 or over. Due to the competition for places the following skills and attributes relevant to working within the polymer processing industries may be considered as part of the application process;
• motivation to succeed within industry
• an awareness of the demands of the Apprenticeship
• willingness to comply with employer/training provider terms and conditions of employment
• have the ability to apply learning in the workplace
• willingness to work with due regard to Health and Safety of self and others
• effective communication with a range of people.

The following examples of evidence can be used to support some of the above statements, such as;
• progression from a Polymer Processing Operations Foundation Apprenticeship or a Foundation Apprenticeship in a related discipline or
• previous work experience or employment or
• voluntary or community based work or
• achievement of GCSEs (A*-C) or equivalent qualifications in Maths, English, Science and Design & Technology or
• achievement of the Welsh Baccalaureate (Intermediate/ Advanced Diploma) Principal Learning in Engineering or Manufacturing & Product Design or
• achievement of Awards, Certificates or Diplomas in a related industry such as Science or Engineering or
• proof of completion of non-accredited courses.

All Foundation Apprenticeship/ Apprenticeship applicants should be aware of the varied working conditions within the polymer processing industries, that may include;
• working at heights
• shiftwork (including nights and weekends)

- 365 day operations
- working outdoors
- wearing specialist safety equipment
- working within high hazard environment.

Level 2

Title for this framework at level 2

Foundation Apprenticeship in Polymer Processing Operations

Pathways for this framework at level 2

Pathway 1: Production Operations

Level 2, Pathway 1: Production Operations

Description of this pathway

Polymer Processing Operations (Polymer/ Composite Operator)

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

None

Job title(s)	Job role(s)
Polymer/Composite Operator	Safely operate machines to construct, assemble and finish component parts or finished products by hand or by machine.

Qualifications

Competence qualifications available to this pathway

N/A

Knowledge qualifications available to this pathway

N/A

Combined qualifications available to this pathway

B1 - Level 2 Certificate in Polymer/Polymer Composite Operations (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B1a	501/1163/2	PAA\VQSET	27	130	N/A
B1b	600/1631/0	Edexcel	27	130	N/A

Notes on competence and knowledge qualifications (if any)

Level 2 Certificate in Polymer/Polymer Composite Operations (QCF) - 27 Credits

For the Level 2 Certificate in Polymer/Polymer Composite Operations (QCF) learners must achieve a minimum of 27 Credits by taking one of the following pathways:

- **Pathway A** - Polymer Machine Operations or
- **Pathway B** - Polymer Hand-Based Operations.

Pathway A - Polymer Machine Operations Pathway
Learners must complete;
- 1 common Mandatory Unit,
- 3 Pathway-specific Mandatory Units and
- 11 Credits from Optional Units.

(Pathway A – Minimum knowledge = 14 Credits)

Pathway B - Polymer Hand-Based Operations Pathway
Learners must complete;
- 1 common Mandatory Unit,
- 3 Pathway-specific Mandatory Units and
- 14 Credits from Optional Units.

(Pathway B – Minimum knowledge = 13 Credits)

[C] = Competence [K] = Knowledge

Pathway A - Polymer Machine Operations

Mandatory Units

• Meet safety, health and environmental requirements in the workplace within polymer processing and related environments *[C- 1 Credit, K- 2 Credits]*
• Prepare to start up a machine-based production process *[C - 2 Credits, K - 2 Credits]*
• Start up and maintain a machine-based production process *[C - 2 Credits, K - 3 Credits]*
• Shutdown a machine-based production process *[C - 2 Credits, K - 2 Credits]*

Optional Units – (11 credits to be achieved)

• Inspect products *[C- 2 Credits, K- 2 Credits]*
• Finish products *[C- 1 Credit, K- 1 Credit]*
• Contribute to the provision of ancillary systems *[C - 3 Credits, K - 2 Credits]*
• Pick polymer stock and make up orders *[C- 1 Credit, K- 2 Credits]*
• Prepare materials for processing according to instructions *[C - 2 Credits, K - 1 Credit]*
• Maintain the condition of process equipment *[C - 3 Credits, K - 4 Credits]*
• Carry out simple sampling operations *[C- 1 Credit, K- 2 Credits]*
• Carry out simple testing operations *[C- 1 Credit, K- 2 Credits]*
• Accept, verify and store materials required for process operations *[C- 1 Credit, K- 2 Credits]*
• Supply materials required for process operations *[C- 1 Credit, K- 2 Credits]*
• Assemble products *[C- 1 Credit, K- 2 Credits]*
• Contribute to the maintenance of product quality *[C- 1 Credit, K- 2 Credits]*
• Establish and maintain effective working relationships within polymer processing and related environments *[C- 1 Credit, K- 1 Credit]*
• Contribute to the handover of production activities *[C- 1 Credit, K- 2 Credits]*

Pathway B - Polymer Hand-Based Operations

Mandatory Units

• Meet safety, health and environmental requirements in the workplace within polymer processing and related environments *[C- 1 Credit, K- 2 Credits]*
• Prepare to produce products by hand-based operations *[C - 2 Credits, K - 2 Credits]*
• Produce products using hand-based operations *[C - 2 Credits, K - 2 Credits]*
• Finish products *[C- 1 Credit, K- 1 Credit]*

Optional Units – (14 credits to be achieved)

• Inspect products *[C - 2 Credits, K - 2 Credits]*

- Contribute to the provision of ancillary systems *[C - 3 Credits, K - 2 Credits]*
- Pick polymer stock and make up orders *[C- 1 Credit, K- 2 Credits]*
- Prepare materials for processing according to instructions *[C - 2 Credits, K - 1 Credit]*
- Maintain the condition of process equipment *[C - 3 Credits, K - 4 Credits]*
- Carry out simple sampling operations *[C- 1 Credit, K- 2 Credits]*
- Carry out simple testing operations *[C- 1 Credit, K- 2 Credits]*
- Accept, verify and store materials required for process operations *[C- 1 Credit, K- 2 Credits]*
- Supply materials required for process operations *[C- 1 Credit, K- 2 Credits]*
- Assemble products *[C- 1 Credit, K- 2 Credits]*
- Contribute to the maintenance of product quality *[C- 1 Credit, K- 2 Credits]*
- Establish and maintain effective working relationships within polymer processing and related environments *[C- 1 Credit, K- 1 Credit]*
- Contribute to the handover of production activities *[C- 1 Credit, K- 2 Credits]*

Transferable skills (Wales)

Essential skills (Wales)

	Minimum level	Credit value
Communication	Level 1	6
Application of numbers	Level 1	6
IT	Level 1	6

Progression routes into and from this pathway

Progression into this pathway:

There are no pre-defined routes of entry into the Polymer Processing Operations Foundation Apprenticeship, however, new entrants to the industry may be looking to progress from the following areas:

• Work based qualifications such as NVQs/ SVQs or vocationally related qualifications in a subject related to Polymer Processing Operations. (Examples may include: BTEC's, City & Guilds, PAA/VQ-SET Diplomas/ Certificates/ Awards)
• GCSEs in Science, Maths, Engineering or Design & Technology also provide a strong platform for progression on to the framework.
• Welsh Baccalaureate (Foundation/ Intermediate Diploma) Principal Learning in Engineering or Manufacturing & Product Design also provide an excellent opportunity for progression in to polymer processing.
• Previous experience in the polymer rocessing industries or a related discipline can also be an appropriate route of entry.

Progression from this pathway:

Following completion of this Foundation Apprenticeship there are several options open to the successful candidate who wishes to continue their development in order to progress their career. There are opportunities to continue to undertake further vocational training or academic qualifications. These may include (but are not exclusive to) the following:
• Apprenticeship in Polymer Processing Operations or a related discipline
• Welsh Baccalaureate (Intermediate/ Advanced Diploma) Principal Learning in Engineering or Manufacturing & Product Design

• Develop their career in coaching through undertaking Assessor and Verifier Awards
• Qualifications in a related area, including (but not limited to) Health & Safety, Training & Development, Business Improvement Techniques and Supervisory Management.
• Cogent Gold Standard qualifications contained within the Gold Standard frameworks (www.cogent-prospectus.com)

Successful completion of the Foundation Apprenticeship could lead to one of the following job roles:

• Process Setter/ Operator
• Quality Control Inspector
• Finishing & Assembly Operative

Delivery and assessment of employee rights and responsibilities

This Employee Rights and Responsibilities (ERR) section has no QCF Credit Value.

It is important that all employees understand and can demonstrate an understanding of their rights and responsibilities as an employee.

The Cogent Employee's Rights and Responsibilities (ERR) Workbook and Assessment Document has been designed to assist employers and training providers and should be used to deliver this mandatory element of the Apprenticeship Framework.

The content is as follows: -

1. Statutory rights and responsibilities under Employment Law.
2. Procedures and documentation that affect the relationship between employee and employer.
3. Sources of information and advice on employment rights and responsibilities.
4. The role played by an Apprentice's occupation in the organisation and industry.
5. Career pathways open to an Apprentice.
6. The types of representative bodies relevant to the industry and organisation and their main roles and responsibilities.
7. Where and how to get advice on the industry, occupation, training and careers.
8. Organisational principles and codes of practice.
9. Issues of public concern that affect the organisation and industry.

It is essential that the Apprentice can demonstrate competence in ERR and, as a result, is required to provide documentary evidence confirming their achievements. Examples of how the evidence can be gathered by individuals include;

- completing a company induction,
- attending relevant taught off-the-job training sessions
- on-the-job assessment.

When applying for the Foundation Apprenticeship/Apprenticeship Certificate, the training provider or employer will provide evidence that ERR has been achieved by submitting a copy of the completed assessment document, signed by both the apprentice and the assessor.

Upon progression from an Foundation Level Apprenticeship to an Apprenticeship, apprentices

would be exempt from this requirement provided that they are still with the same employer.

To obtain a copy of the workbook and assessment document, please visit the Apprenticeship section of the Cogent website. (www.cogent-ssc.com)

Level 3

Title for this framework at level 3

Apprenticeship in Polymer Processing Operations

Pathways for this framework at level 3

Pathway 1:	Processing Operations

Level 3, Pathway 1: Processing Operations

Description of this pathway

Polymer Processing Operations (Production Operator/Technician)

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

None

Job title(s)	Job role(s)
Production Operator/Technician	Make complex polymer components using a machine or by hand based operations

Qualifications

Competence qualifications available to this pathway

C1 - Level 3 Diploma in Polymer/Polymer Composite Operations (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
C1a	501/1173/5	PAA\VQSET	39	220	N/A
C1b	600/1630/9	Edexcel	39	220	N/A

Knowledge qualifications available to this pathway

K1 - Level 3 BTEC Level 3 Diploma in Applied Science (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K1a	500/66736/0	Edexcel	120	720	N/A

K2 - BTEC Level 3 Subsidiary Diploma in Applied Science (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K2a	500/6725/4	Edexcel	60	360	N/A

K3 - BTEC Level 3 Diploma in Engineering (Specialist: Manufacturing Engineering) (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K3a	500/8164/0	Edexcel	60	360	N/A

Combined qualifications available to this pathway

N/A

Notes on competence and knowledge qualifications (if any)

K1 or K2 or K3 will provide the underpinning knowledge and understanding for C1a or C1b.

The decision on which knowledge qualification the apprentices will undertake will be made by the training provider and employer, based on the experience of the apprentice, future job role requirements and the complexity of the employer's operations. It is satisfactory to achieve this apprenticeship by undertaking the minimum knowledge qualification of 360 Guided Learning Hours (Training Hours).The knowledge qualification of 720 Guided Learning Hours (Training Hours) will provide a more in-depth technical knowledge if required.

The credit value and guided learning hours (training hours) quoted in the above tables are the minimum for the qualification as stated on the Register of Regulated Qualifications. These credit vaues and guided learning hours (training hours) may vary according to specific pathways/ options taken within the qualifications. For further details please refer to the Register of Regulated Qualifications (http://register.ofqual.gov.uk).

Transferable skills (Wales)

Essential skills (Wales)

	Minimum level	Credit value
Communication	Level 2	6
Application of numbers	Level 2	6
IT	Level 2	6

Progression routes into and from this pathway

Progression into this pathway:

There are no pre-defined routes of entry into the Polymer Processing Operations Apprenticeship, however, new entrants to the industry may be looking to progress from the following areas:

• Completion of a Foundation Apprenticeship in Polymer Processing Operations or a related discipline
• Work based qualifications such as NVQs/ SVQs or vocationally related qualifications in a subject related to Polymer Processing Operations. (Examples may include: BTEC's, City & Guilds, PAA/VQ-SET Diplomas/ Certificates/ Awards)
• GCSEs in Science, Maths, Engineering or Design & Technology also provide a strong platform for progression on to the framework.
• Welsh Baccalaureate (Intermediate/ Advanced Diploma) Principal Learning in Engineering or Manufacturing & Product Design also provide an excellent opportunity for progression in to polymer processing.
• Previous experience in the polymer processing industries or a related discipline can also be an appropriate route of entry.

Progression from this pathway:

Following completion of this Apprenticeship there are several options open to the successful candidate who wishes to continue their development in order to progress their career. There are opportunities to continue to undertake further vocational training or academic qualifications. These may include (but are not exclusive to) the following:
• Foundation Degree in Polymer Technology or a related discipline
• Welsh Baccalaureate (Advanced Diploma) Principal Learning in Engineering or Manufacturing

& Product Design
• Develop their career in coaching through undertaking Assessor and Verifier Awards
• Qualifications in a related area, including (but not limited to) Health & Safety, Training & Development, Business Improvement Techniques and Supervisory Management.
• Cogent Gold Standard qualifications contained within the Gold Standard frameworks (www.cogent-prospectus.com)

Successful completion of the Apprenticeship could lead to one of the following job roles:
• Process Operative/ Technician
• Quality Control Inspector

For a more in depth look at careers within the Cogent Industries, please look at our careers pathway website at www.cogent-careers.com.

UCAS points for this pathway: Not applicable

Delivery and assessment of employee rights and responsibilities

This Employee Rights and Responsibilities (ERR) section has no QCF Credit Value.

It is important that all employees understand and can demonstrate an understanding of their rights and responsibilities as an employee.

The Cogent Employee's Rights and Responsibilities (ERR) Workbook and Assessment Document has been designed to assist employers and training providers and should be used to deliver this mandatory element of the Apprenticeship Framework.

The content is as follows: -

1. Statutory rights and responsibilities under Employment Law.
2. Procedures and documentation that affect the relationship between employee and employer.
3. Sources of information and advice on employment rights and responsibilities.
4. The role played by an Apprentice's occupation in the organisation and industry.
5. Career pathways open to an Apprentice.
6. The types of representative bodies relevant to the industry and organisation and their main roles and responsibilities.
7. Where and how to get advice on the industry, occupation, training and careers.
8. Organisational principles and codes of practice.
9. Issues of public concern that affect the organisation and industry.

It is essential that the Apprentice can demonstrate competence in ERR and, as a result, is required to provide documentary evidence confirming their achievements. Examples of how the evidence can be gathered by individuals include;

- completing a company induction,
- attending relevant taught off-the-job training sessions
- on-the-job assessment.

When applying for the Foundation Apprenticeship/Apprenticeship Certificate, the training provider or employer will provide evidence that ERR has been achieved by submitting a copy of the completed assessment document, signed by both the apprentice and the assessor.

Upon progression from an Foundation Level Apprenticeship to an Apprenticeship, apprentices would be exempt from this requirement provided that they are still with the same employer.

To obtain a copy of the workbook and assessment document, please visit the Apprenticeship section of the Cogent website. (www.cogent-ssc.com)

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

How equality and diversity will be met

The Polymer Processing Operations Foundation Apprenticeship/ Apprenticeship aims to promote diversity, opportunity and inclusion by offering high-quality, learning opportunities.

The delivery of the Apprenticeship Framework must be in environments free from prejudice and discrimination where all learners can contribute fully and freely and feel valued.

There must be no overt or covert discriminatory practices in selection and recruitment of Apprentices to the programme, which is available to all people, regardless of gender, ethnic origin, religion/belief, sexual orientation or disability who meet the stated selection criteria.

Issues in Wales
Gender: there is an under-representation of women within the sector.

Ethnicity: representation of ethnic minority groups is low.

Age: in the polymer processing industries, there is an ageing workforce.

Barriers
The polymer processing industry is dominated by SME's where there is often a high turnover of staff responding to market conditions. Whilst the modern polymer processing industry is efficient, clean and has a good safety record, there is still a misconception the work is dirty and dangerous. Careers advice regarding entry in to the industry is often poor. There are specific geographical clusters of polymer companies in Wales which may also prove to be a barrier to access.

Actions
Cogent have introduced a series of industry specific case studies and Careers Pathways on the Cogent Careers web site (www.cogent-careers.com) to encourage people from all backgrounds to enter the polymer processing industry.

Cogent regularly support regional/ national careers fairs/ skills events in Wales to promote

apprenticeships, providing an ideal opportunity to address issues faced by women and ethnic minorities.

Cogent are also working with representative groups such as the United Kingdom Resource Centre, engaging with their Women in Science and Engineering Work programmes.

On and off the job training (Wales)

Summary of on- and off-the-job training

For both Foundation Apprenticeships and Apprenticeships these hours may vary depending on previous experience and attainment of the apprentice. Where a learner enters an apprenticeship agreement having previously attained or acquired the appropriate competence or knowledge, this prior learning needs to be recognised and documented using the relevant QCF credit transfer, QCF exemption or Recognition of Prior Learning (RPL) procedures. The amount of 'on-the-job' training required to complete the apprenticeship under the apprenticeship agreement may then be reduced accordingly, provided the total numbers of 'on-the-job' hours for this framework can be verified for apprenticeship certification.

Those apprentices who commence training under a new apprenticeship agreement with a new employer may bring a range of prior experience with them. When an apprentice can claim 5% or more hours towards the 'on-the-job' framework total through prior learning acquired from previous full-time education, employment or other vocational programme, then the apprentice's learning programme should include "customisation". Training providers are encouraged to identify additional 'on-the-job' training programmes that customise the learning to the new workplace. Customisation programmes may include selecting appropriate additional Unit(s) from QCF qualifications, or relevant units recognised as Quality Assured Lifelong Learning [QALL] through a CQFW recognised body, or follow Essential Skills at a level higher than that specified in the framework, including one or more Wider Key Skills or other competency-based qualifications/units relevant to the workplace.

For apprentices who have already achieved the relevant qualification, they must have been certificated within 5 years from the date of application for the Foundation Apprenticeship/ Apprenticeship Certificate or have been continuously employed in the industry for a minimum duration of 3 years.

Job roles within the polymer processing/ polymer composite Industries require a thorough level of technical competence and knowledge which will be undertaken through work-based training, practice, experience and academic study.

'On-the-job' learning must be formally recorded, either in a diary, workbook, and portfolio or be verified by attendance records. This evidence needs to be checked and signed by the employer or mentor. These records of hours may need to be submitted to the Certifying Authority when applying for an apprenticeship completion certificate.

There are two levels of Apprenticeship contained in this framework:

• The Foundation Apprenticeship (Level 2) in Polymer Processing Operations (Usually takes 12 months to complete)

• The Apprenticeship (Level 3) in Polymer Processing Operations (Usually takes 24 to 36 months to complete)

Foundation Apprenticeship:

Below are the off-the-job and on-the- job training hours for the Production Operator pathway. The components of the framework undertaken will be decided by the employer, provider and the apprentice and will be based on the employer's requirements and the prior achievements and past experiences of the apprentice.

Foundation Apprenticeship Production Operations Pathway: 345 Total Training Hours

PAA/VQ-SET or Edexcel Level 2 Certificate in Polymer/ Polymer Composite Operations (QCF) (130 Training Hours). This is a combined qualification containing both competence and knowledge units.
Other framework includes requirements covering Essential Skills Wales, ERR, and mentoring (215 Training Hours).

Apprenticeship:

Below are the off-the-job and on-the- job training hours for the Production Operator/Technician pathway. The components of the framework undertaken will be decided by the employer, provider and apprentice and will be based on the employer's requirements and the prior achievements and past experiences of the apprentice.

Apprenticeship Processing Operations Pathway 1a: 1155 Total Training Hours

PAA\VQSET or Edexcel Level 3 Diploma in Polymer/ Polymer Composite Operations (QCF) (220 Training Hours).
Edexcel BTEC Level 3 Diploma in Applied Science (QCF) (720 Training Hours)
Other framework includes requirements covering Essential Skills Wales, ERR, and mentoring (215 Training Hours).

Apprenticeship Processing Operations Pathway 1b: 795 Total Training Hours

PAA\VQSET or Edexcel Level 3 Diploma in Polymer/ Polymer Composite Operations (QCF) (220 Training Hours).
Edexcel BTEC Level 3 Subsidiary Diploma in Applied Science (QCF) (360 Training Hours)
Other framework includes requirements covering Essential Skills Wales, ERR, and mentoring (215 Training Hours).

Apprenticeship Processing Operations Pathway 1c: 795 Total Training Hours

PAA\VQSET or Edexcel Level 3 Diploma in Polymer/ Polymer Composite Operations (QCF) (220 Training Hours).
Edexcel BTEC Level 3 Diploma in Engineering (Specialist: Manufacturing Engineering) (QCF) (360 Training Hours)
Other framework includes requirements covering Essential Skills Wales, ERR, and mentoring (215 Training Hours).

The length of time to complete the Apprenticeship will be dependent on previous competence and knowledge undertaken by the apprentice. For further information on "prior learning" please see sections later on in this document.

Minimum credits for each pathway:

- Production Operator Foundation Apprenticeship Pathway: 45 Credits
- Processing Operations Apprenticeship Pathway 1a: 177 Credits
- Processing Operations Apprenticeship Pathway 1b: 117 Credits
- Processing Operations Apprenticeship Pathway 1c: 117 Credits

Off-the-job training

Off the job training

'Off-the-job' training is defined as time for learning activities away from normal work duties. For this framework the training hours for 'off-the-job' training is as follows:

The amount of 'off-the-job' training hours required to complete both the Foundation Apprenticeship/ Apprenticeship includes 215 Training Hours of additional time necessary to meet all of the framework requirements covering Essential Skills Wales, ERR and mentoring.

Foundation Apprenticeship

Below are the off-the-job training hours for the Production Operator pathway. The components of the framework undertaken will be decided by the employer, provider and apprentice and be based on the employer's requirements and the prior achievements and prior experience of the apprentice.

Production Operations Pathway: 280 'off-the-job' Training Hours
PAA\VQSET or Edexcel Level 2 Certificate in Polymer/Polymer Composite Operations (QCF) (65 'off-the-job' Training Hours)
Additional framework requirements (215 'off-the-job' Training Hours)

Apprenticeship

Below are the 'off-the-job' Training Hours for the Production Operator/Technician. The components of the framework undertaken will be decided by the employer, provider and apprentice and be based on the employer's requirements and the prior achievements and prior experience of the apprentice.

Processing Operations Pathway 1a: 935 'off-the-job' Training Hours
Edexcel BTEC Level 3 Diploma in Applied Science (QCF). (720 'off-the-job' Training Hours)
Additional framework requirements (215'off-the-job' Training Hours)

Processing Operations Pathway 1b: 575 'off-the-job' Training Hours
Edexcel BTEC Level 3 Subsidiary Diploma in Applied Science (QCF) . (360 'off-the-job' Training Hours)
Additional framework requirements (215 'off-the-job' Training Hours)

Processing Operations Pathway 1c: 575 'off-the-job' Training Hours

Edexcel BTEC Level 3 Diploma in Engineering (Specialist: Manufacturing Engineering) (QCF) (360 'off-the-job' Training Hours)
Additional framework requirements (215 'off-the-job' Training Hours)

How this requirement will be met

Foundation Apprenticeship

Pathway – Production Operations

Evidence:

Copy of a Combined Certificate for the knowledge qualification –
• Level 2 Certificate in Polymer/Polymer Composite Operations (QCF)
Copies of the required Certificates for Essential Skills Wales
Copy of the completed assessor's evidence document for Employee Rights & Responsibilities
Copy of a signed declaration from the training provider stating how the training hours for other types of 'off-the-job' training has been achieved.

Example: How the 'off-the-job' learning requirement will be met using the Production Operations Pathway

• Level 2 Certificate in Polymer/Polymer Composite Operations (QCF) [130 Training Hours] **(65 Training Hours - knowledge)**
• Level 1 Essential Skills Wales Math's (alternatively Key Skill Level 1 Application of Number)[45 Training Hours]*
• Level 1 Essential Skills Wales English (alternatively Key Skill Level 1 Communication) [45 Training Hours]*
• Level 1 Essential Skills Wales Information Communication Technology (ICT) (alternatively Key Skill Level 1 ICT) [45 Training Hours]*
• Company Induction and Employee's Rights and Responsibilities (ERR) [40 Training Hours]
• Mentoring for the duration of the framework [40 Training Hours]

• **Total** [280 Training Hours]

* - Please refer to section on Transferable Skills for a list of exemptions or proxy qualifications.

Apprenticeship

Pathway – Processing Operations

Evidence:

Copy of a Certificate for the knowledge qualification –
• Level 3 Diploma in Applied Science (QCF) or
• Level 3 Subsidiary Diploma in Applied Science (QCF) or
• Level 3 Diploma in Engineering (Specialist Manufacturing Engineering) (QCF)
• Copies of the required Certificates for Essential Skills Wales
Copy of the completed assessor's evidence document for Employee's Rights & Responsibilities
Copy of a signed declaration from the training provider stating how the training hours for other types of 'off-the-job' training has been achieved.

Example: How the 'off-the-job' learning requirement will be met using the Processing Operations Pathway 1a

• Level 3 Diploma in Applied Science [720Training Hours]
• Level 2 Essential Skills Wales Maths (alternatively Key Skill Level 2 Application of Number) [45 Training Hours]*
• Level 2 Essential Skills Wales English (alternatively Key Skill Level 2 Communication) [45 Training Hours]*
• Level 2 Essential Skills Wales Information Communication Technology (ICT) (alternatively Key Skill Level 2 ICT) [45 Training Hours]*
• Company Induction and Employee's Rights and Responsibilities (ERR) [40 Training Hours]
• Mentoring for the duration of the framework [40 Training Hours]

• **Total** [935 Training Hours]

Example: How the 'off-the-job' learning requirement will be met using the Processing Operations Pathway 1b

• Level 3 Subsidiary Diploma in Applied Science [360 Training Hours]
• Level 2 Essential Skills Wales Maths (alternatively Key Skill Level 2 Application of Number) [45 Training Hours]*
• Level 2 Essential Skills Wales English (alternatively Key Skill Level 2 Communication) [45 Training Hours]*
• Level 2 Essential Skills Wales Information Communication Technology (ICT) (alternatively Key Skill Level 2 ICT) [45 Training Hours]*
• Company Induction and Employee's Rights and Responsibilities (ERR) [40 Training Hours]
• Mentoring for the duration of the framework [40 Training Hours]

• **Total** [575 Training Hours]

Example: How the 'off-the-job' learning requirement will be met using the Processing Operations Pathway 1c

• Level 3 Diploma in Engineering (Specialist: Manufacturing Engineering) [360 Training Hours]
• Level 2 Essential Skills Wales Maths (alternatively Key Skill Level 2 Application of Number) [45 Training Hours]*
• Level 2 Essential Skills Wales English (alternatively Key Skill Level 2 Communication) [45 Training Hours]*
• Level 2 Essential Skills Wales Information Communication Technology (ICT) (alternatively Key Skill Level 2 ICT) [45 Training Hours]*
• Company Induction and Employee's Rights and Responsibilities (ERR) [40 Training Hours]
• Mentoring for the duration of the framework [40 Training Hours]

• **Total** [575 Training Hours]

* - Please refer to section on Transferable Skills for a list of exemptions or proxy qualifications.

Training hours 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 a learner enters an apprenticeship agreement having previously attained parts or all of the relevant qualifications, this prior learning needs to be recognised using either QCF credit transfer for achievement within the QCF or through recording of exceptions for certification learning outside of the QCF, for example Principal Learning qualifications.
For an apprentice who has already achieved the relevant qualifications, they must have been certificated within 5 years of applying for the Foundation Apprenticeship/ Apprenticeship Certificate.

Previous experience

Where a learner enters an apprenticeship agreement with previous work-related experience,

this prior learning needs to be recognised. For further details please see QCF guidance on claiming credit. To count towards apprenticeship certification, previous experience must be recorded using the appropriate Awarding Organisation's QCF "Recognition of Prior Learning" procedures and the hours recorded may then count towards the off-the-job hours required to complete this apprenticeship.
For an apprentice with prior uncertificated learning experience, the off-the-job learning must have been acquired within 2 years of application for the Foundation Apprenticeship/ Apprenticeship Certificate or have been continuously employed in the relevant job role in the industry for a minimum duration of 3 years.

Off-the-job training needs to:
• Be planned, reviewed and evaluated jointly between the apprentice and a tutor, teacher, mentor or manager;
• Allow access as and when required by the apprentice either to a tutor, teacher, mentor or manager;
• Be delivered during contracted working hours;
• Be delivered through one or more of the following methods: individual and group teaching , e-learning, distance learning, coaching, mentoring, feedback and assessment, collaborative/networked learning with peers, guided study and induction.

Off-the-job training must be formally recorded either in a diary, workbook, portfolio, or be verified by attendance records. The evidence needs to be checked and signed by the assessor and employer.

On-the-job training

'On-the-job' training is defined as skills, knowledge and competence gained within normal working duties. For this framework the training hours for 'on-the-job' training is as follows:

Foundation Apprenticeship

Production Operations Pathway: 65 Training Hours
PAA\VQ-SET or Edexcel Level 2 Certificate in Polymer/Polymer Composite Operations (QCF) (65 'on-the-job' Training Hours)

Apprenticeship

Processing Operations Pathway 1a, 1b or 1c: 220 Training Hours.
PAA\VQ-SET or Edexcel Level 3 Diploma in Polymer/Polymer Composite Operations (QCF)

How this requirement will be met

Foundation Apprenticeship

Pathway – Production Operations

Evidence:

Copy of a Certificate for the competence qualification –
• Level 2 Certificate in Polymer/Polymer Composite Operations
Copy of any certificates for any training courses attended
Copy of any completed assessor/ monitoring reports
Copy of any signed declaration from the training provider stating how the training hours for other types of 'on-the-job' training has been achieved.

Apprenticeship

Pathway – Processing Operations

Evidence:

Copy of a Certificate for the competence qualification –
• Level 3 Diploma in Polymer/Polymer Composite Operations
Copy of any certificates for any training courses attended
Copy of any completed assessor/ monitoring reports
Copy of any signed declaration from the training provider stating how the training hours for other types of 'on-the-job' training has been achieved.

Wider key skills assessment and recognition (Wales)

Improving own learning and performance

The wider key skill of "Improving own learning and performance", whilst not assessed as part of this framework, is embedded within the learning undertaken in the mandatory units of the competence qualification.

Working with others

The wider key skill of "Working with others", whilst not assessed as part of this framework, is embedded within the learning undertaken in the mandatory units of the competence qualification.

Problem solving

The wider key skill of "Problem solving", whilst not assessed as part of this framework, is embedded within the learning undertaken in the mandatory units of the competence qualification.

Additional employer requirements

None

apprenticeship
FRAMEWORKS ONLINE

For more information visit
www.apprenticeshipframeworksonline.semta.org.uk