

Qualification Manual

EAL Level 2 Certificate in Metals Industries
Processes (QCF)

QUALIFICATION CODE: 500/7998/0

ISSUE: 1

Contents

1.0 About EAL	3
2.0 Introduction to the Qualification	4
❑ 2.1 Accreditation & Industry Support for this Qualification.....	4
❑ 2.2 Achievement of the Qualification & ‘Stand Alone Units’	5
❑ 2.3 Relation to Other Qualifications	6
❑ 2.4 Qualification Support Materials	6
❑ 2.5 Funding for this Qualification	7
❑ 2.6 Employer Training Resource for this Qualification	7
3.0 Rule of Combination (Qualification Structure)	8
4.0 Centre & Qualification Approval	9
5.0 Profiles & Requirements	10
❑ 5.1 Teaching Staff.....	10
❑ 5.2 Assessors	10
❑ 5.3 Quality Assurance Staff.....	10
❑ 5.4 Personnel Conducting the External Assessment	11
❑ 5.5 Learners.....	11
❑ 5.6 Physical Resources.....	11
6.0 Assessment	12
❑ 6.1 Internal (Centre Marked) Assessment	14
Appendix 1: Qualification & Credit Framework (QCF)	15
Appendix 2: Functional Skills & Essential Skills Wales	16
Appendix 3: Potential Sources of Teaching Information	17
Appendix 4: Relation to National Occupational Standards	18
Appendix 5: Learner Registration & Certification	19
Appendix 6: Unit Details	20

1.0 About EAL

Since 1964, **EAL (EMTA Awards Limited)** has been awarding superior vocational qualifications and apprenticeship components for engineering, building services and related sectors.

Developed to the highest technical standard, our qualifications are regularly updated to reflect regulatory and technical changes. We support the providers of our qualifications with an unparalleled level of service to ensure that learners are well prepared for the roles they plan to take on.

EAL recognise the value of skills in the work environment as one of the 5 key drivers of productivity; essential for economic growth and bringing a number of wider social benefits. Through its programme of continuous improvement EAL strives to meet the demand from employers for high performing, high quality products.

For further information please contact EAL Customer Services +44(0)870 240 6889 or visit www.eal.org.uk.

2.0 Introduction to the Qualification

What is this qualification?

This vocationally related qualification (VRQ) has been developed to support the requirement for a technical certificate in the Metals Processing Apprenticeship Framework.

It is for learners who are undertaking the Metals Processing framework to develop in the key areas identified within the unit titles. It was developed to fill a gap in the market for a qualification supporting the need for a VRQ to support the delivery of the underpinning knowledge requirements of the metals industry.

This qualification has been developed in close consultation with colleges, training associations and industry to ensure that the qualification meets the needs of the industrial sector. In addition, EAL has consulted throughout the development of this qualification to ensure that the structure and content meet industry's and the learners' needs.

Who is this qualification for?

- Have or are working in a metals industry process environment but have no formal qualifications
- Are completing an apprenticeship in metal processing
- Are looking for career progression within the metal processing workplace
- Wish to learn additional knowledge relevant to the workplace.

There are no pre-entry requirements for candidates choosing this qualification.

What does this qualification cover?

This level two qualification covers the knowledge and understanding required by someone preparing to work in the metals process industry. The qualification covers a wide range of subjects including safety; communications, working relationships, rights and responsibilities, the types, properties and applications of metals and primary and secondary metals processing methods

[See section 3.0 for further details.](#)

2.1 Accreditation & Industry Support for this Qualification

This qualification:

- Is accredited by Ofqual at level two.

2.2 Achievement of the Qualification & ‘Stand Alone Units’

This qualification is gained when all the necessary units have been achieved. The centre will then be able to apply for the learner’s Certificate. The learner will also receive a Certificate of Unit Credit, listing all the units they have achieved.

However if they don’t manage to complete the full qualification learners can still claim a Certificate of Unit Credit for the units achieved therefore, they still have proof of their ability and could complete the qualification at a later date.

Units can also be taken individually (stand alone). This manual *must be* used in conjunction with the delivery and assessment of any individual units to ensure that assessment requirements and methodologies are consistently applied.

2.3 Relation to Other Qualifications

This qualification relates to:

- EAL Qualifications in Key Skills, Functional Skills and Essential Skills Wales,
- EAL L1 Certificate in Arc Welding
- EAL L2 Certificate in Positional Welding
- EAL L2 Diploma in Performing Engineering Operations (QCF)
- EAL L2 Diploma in Performing Manufacturing Operations (QCF)
- EAL L2 Diploma in Engineering Maintenance And Installation (QCF)
- EAL L2 Diploma in Marine Engineering (QCF)
- EAL L2 NVQ in Fabrication And Welding Engineering
- EAL L2 Diploma in Mechanical Manufacturing Engineering (QCF)

Details on these can be obtained from the EAL Website or alternatively contact:

- EAL Customer Services
Tel: +44 (0)870 240 6889
Email: customercare@eal.org.uk

2.4 Qualification Support Materials

The following materials are available for this qualification:

- **Qualification Units:**
These documents contain the knowledge and/or the practical assessment criteria. They also contain delivery advice, and all the centre assessment material (internal assessments). Where a unit has an externally set exam, this will be indicated on the unit. The units also clearly show:
 - [QCF level & Credit value](#)
 - Guided learning hours (GLH)
 - Title, Unit purpose/aims
 - Summary of learning outcomes.
- **Learner packs:**
These are designed to assist the delivery staff in administration of the internal assessments.

EAL have also provided for centres:

- EAL Centre Operations Manuals - This sets out the requirements for EAL Centres, contains all necessary documentation and also contains helpful teaching and delivery advice. The EAL Centre Operations Manual **must** be adhered to in the delivery of this qualification.

All these materials can be accessed from the EAL Website www.eal.org.uk. Note: Further delivery support materials will be available in the future for this qualification.

2.5 Funding for this Qualification

The following bodies will be able to assist you with your funding queries.

For England:

- Skills Funding Agency.
<http://skillsfundingagency.bis.gov.uk/>
Cheylesmore House
Quinton Road
Coventry
CV1 2WT
- Also, search the Learning Aims Database (LAD) for the qualification code given on the front page of this Manual; this will give an indication of the funding status.

For Wales:

- Contact the
Welsh Assembly Government
<http://wales.gov.uk/topics/educationandskills/?lang=en>
Cathays Park
Cardiff
CF10 3NQ

For Northern Ireland:

- Contact the
Department for Employment and Learning
<http://www.delni.gov.uk/>
Adelaide House
39-49 Adelaide Street
Belfast
BT2 8FD

For all Nations and further guidance:

- Contact Senta
14 Upton Road
Watford
WD18 0JT
Tel: 01923 238441

2.6 Employer Training Resource for this Qualification

If you are an employer and you require details of training for this qualification contact the National Skills Academy for Manufacturing, which exists to provide the sector with the training it needs to stay world-class.

The Skills Academy has approved a range of high quality training products and services designed to deliver bottom line business benefits to employers. These are delivered via a network of providers who have themselves been approved, undergoing rigorous ongoing checks and continued professional development against the Skills Academy standard. Learn more about the Skills Academy's training products and services by clicking onto: http://www.nsa-m.co.uk/products_and_services.aspx

3.0 Rule of Combination (Qualification Structure)

This qualification will be achieved when the learner has successfully completed the common mandatory units followed by the required number of optional units.

All Mandatory Units:

EAL Code	Unit Title	Level	Credit	Guided Learning Hours	Ofqual Code
IEA2/001	<input type="checkbox"/> Understanding health and safety in an industrial environment	2	3	20	F/600/0495
IEA2/002	<input type="checkbox"/> Understanding how to communicate in an industrial environment	2	3	20	Y/600/0499
IEA2/003	<input type="checkbox"/> Understanding working effectively in an industrial environment	2	2	10	R/6000503
IEA2/004	<input type="checkbox"/> Understanding working relationships in an industrial environment	2	2	10	Y/600/0504
IEA2/005	<input type="checkbox"/> Understanding rights and responsibilities in an industrial environment	2	2	10	K/600/0507
IEA2/006	<input type="checkbox"/> Understanding the types, properties and applications of ferrous and non ferrous metals.	2	3	20	L/600/8602
IEA2/007	<input type="checkbox"/> Understanding primary and secondary metals industry processes	2	3	20	D/600/8605

4.0 Centre & Qualification Approval

Centres wishing to run the qualification will need to comply with this Qualification Manual and EAL's centre approval criteria for this qualification. Centres must also put in place the appropriate physical and human resources and administration systems to effectively run the qualification.

Note: For centres that already have the NQF qualification on their centre remit they will automatically have approval to run this QCF qualification.

For *existing* EAL Centres to put the qualification on your centre remit:

- The approval form can be downloaded from the centre area of the EAL Website or alternatively obtained from the EAL Centre Operations Manual. Please contact your EV, or EAL Customer Services (see below) if you need any assistance.

For *non* EAL Centres to gain centre approval to run the qualification:

- Please contact the EAL Customer Services Department who will be delighted to hear from you:
Tel: +44 (0)870 240 6889
Fax: +44 (0)870 240 6890
Email: customercare@eal.org.uk

5.0 Profiles & Requirements

The EAL Centre Operations Manual **must** be followed along with this section.

5.1 Teaching Staff

Teaching staff must:

- Have 2 years experience in teaching/training
or
- Are working towards an appropriate teaching/training qualification (e.g. Cert Ed or Learning & Development trainer units)
or
- Hold an appropriate teaching/training qualification (e.g. Cert Ed or Learning & Development trainer units)

Must also have:

- Knowledge and understanding of the occupation covered by this qualification
- Knowledge and understanding of the structure and content of this qualification.

5.2 Assessors

Assessors must:

- Have 2 years experience in assessment (e.g. within an N/SVQ or teaching/training environment)
or
be working towards an appropriate assessment qualification (e.g. A1/A2)
or
hold an appropriate assessment qualification (e.g. A1/A2)
- Have knowledge and understanding of the occupation covered by the VRQ
- Have knowledge and understanding of the VRQ's structure and content.

5.3 Quality Assurance Staff

Quality assurance staff must:

- Have experience in quality management/internal verification
or
hold an appropriate qualification (e.g. V1)
- Have familiarity of the occupation covered by the qualification
- Have knowledge and understanding of the qualification's structure and content.

5.4 Personnel Conducting the External Assessment

These personnel must:

- Have experience in conducting and controlling exam sessions
or
be supervised, conducting this function, by an individual experienced in conducting and controlling exam sessions
- Have knowledge, understanding and compliance to EAL examination procedures (see the EAL Centre Operations Manual)

5.5 Learners

There are no formal entry requirements for this qualification; although Centres should ensure that the learners have the potential to achieve the units selected within this qualification. Learners must have the minimum levels of literacy and numeracy to comply with the health and safety aspects of the scheme, the completion of the learning outcomes and the external assessment.

Centres should make candidates with particular requirements aware of the practical and theory content of the qualification and they should be given every opportunity to complete all or some of the units. EAL will consider any reasonable suggestions for and from, those with disabilities that would help them to achieve the learning outcomes without compromising the standards required.

Age Restrictions

There are no age restrictions.

5.6 Physical Resources

The resources required for the assessments are detailed in each of the qualification units.

6.0 Assessment

The assessment of this qualification has two aspects – internal Learner study pack (centre marked) assessments and an external (EAL marked) exam, the exam id=s based on the content of the learner study pack. The learner must pass all the internal assessments in the study pack and the external assessment to achieve the qualification. EAL will monitor and externally verify both forms of assessment. The first five units will be only subject to external assessment the remaining two units will only be subject to internal assessment. The EAL Centre Operations Manual must be followed along with this section.

6.1 External (EAL Marked) Assessment

This is an on-screen examination, which assesses the knowledge and understanding relevant to the first five units as follows:

IEA2/001	<input type="checkbox"/>	Understanding health and safety in an industrial environment	2	3	20	F/600/0495
IEA2/002	<input type="checkbox"/>	Understanding how to communicate in an industrial environment	2	3	20	Y/600/0499
IEA2/003	<input type="checkbox"/>	Understanding working effectively in an industrial environment	2	2	10	R/6000503
IEA2/004	<input type="checkbox"/>	Understanding working relationships in an industrial environment	2	2	10	Y/600/0504
IEA2/005	<input type="checkbox"/>	Understanding rights and responsibilities in an industrial environment	2	2	10	K/600/0507

The exam specification is on the following page.

Exam Specification		
Number of questions: 20	Time allowed: 40 minutes	Pass mark: 60% (not graded)
LO	LO Title	N° of Questions covering each learning outcome
1.1	Understand the responsibilities required to meet health and safety legislation and regulations	1
1.2	Understand hazards and risks in the workplace and how they are identified	3
1.3	Understand the need for and types of personal protective equipment	1
1.4	Understand fire emergency procedures in the workplace	1
1.5	Understand accident procedures and how they accidents are reported	1
2.1	Understand the importance of effective workplace communications	1
2.2	Understand how to communicate effectively	1
2.3	Understand the types of technical information found in the industrial workplace	1
3.1	Understand how planning and preparation supports being effective in the workplace	1
3.2	Understand the importance of good housekeeping	1
3.3	Understand why performance reviews are important for effective working	1
3.4	Understand the importance of continuous personal development and objectives	
4.1	Understand how attitude has an influence on behaviour	1
4.2	Understand the legislation that covers discrimination in the workplace	1
4.3	Understand the importance of creating and maintaining good working relationships	1
4.4	Understand the importance of effective team working	1
5.1	Understand the main statutory laws that have an effect on employment	1
5.2	Understand common topics found in a staff handbook	1
5.3	Understand how employment fits in to a career structure	1
5.4	Understand the role of representative bodies in the industrial environment	
Total questions		20

Key Points:

- Learners must be registered for the external assessment component with EAL a specified number of days before the test date to allow for printing and dispatch of papers (refer to the EAL Procedures for Conducting an External Assessment).
- The examination must be undertaken by the learner under controlled conditions as specified by in EAL's procedures for External Assessment contained within the Centre Operations Manual.
- This exam is available as either on-screen or paper based format. The on-screen exam is available on a monthly basis and the result release will be within in 10 days. The paper based exam is available quarterly and result release will be within in 6 weeks . Refer to the exam calendar on the EAL website, for the actual times of both formats.
- The external assessment must be delivered and invigilated by the centre in line with EAL's external assessment procedures.
- EAL's Centre Co-ordinator will assume responsibility for liaison and correspondence regarding the external assessment component.
- Centres will be sampled by EAL to ensure the tests are delivered in accordance with EAL instructions.

6.2 Internal (Centre Marked) Assessment

EAL has designed a 'self-study' booklet for this qualification that allows flexible delivery of the learning outcome requirements to suit the needs of learners and employers. The booklet can be downloaded from the EAL website and allows learners to work through the material at their own pace, with 'knowledge checks' to test them on the information they have covered. The EAL level 2 Certificate in Metals Industries processes is assessed through an online examination of 20 multiple-choice questions based on the content of the workbook. There is still a need for learner support and tutorial-style activities to support delivery.

Appendix 1: Qualification & Credit Framework (QCF)

This is the framework for creating and accrediting qualifications in England, Wales and Northern Ireland. Assessment routes within this qualification have a level and credit. The level is indicative of the challenge. The credit value specifies the number of credits that will be awarded to a learner who successfully achieves the assessment route. One credit is equal to 10 hours of learning time. Learning time is defined as the total time taken by the average learner at this level to fully complete the learning outcomes and assessment requirements of a unit. This includes the guided learning hours (GLH) in the classroom/workshop as well as any direct study, homework, practice, preparation and assessment.

QCF Requirements for Centres

The QCF has requirements for centres in relation to the information provided to the relevant funding bodies. Centres will need to:

- Register the centre with the UK Register of Learning Providers (UKRLP) to obtain a UK Provider Reference Number (UKPRN)
- Become a Learner Registering Body (LRB). This will ensure that every individual 'centre reference number' or UKPRN will be identifiable on one system which is the UKRLP.
- Obtain or confirm Unique Learner Numbers (ULNs) for Learners through the Learner Registration Service (LRS).

The ULN will be issued from and held on the Learner Registration Service (LRS). This number will enable credit accumulation and transfer of learner achievement, and will create a Learner Record. The use of the ULN is mandated by government funding bodies. The ULN may not be applicable for all learners, for example if the learner is not a UK national. The ULN relates to England, Wales and Northern Ireland only. Scotland has a similar number, the Scottish Candidate Number (SCN).

Further details of the ULN and LRS can be obtained from the Learner Records Service.

If you have any further queries or concerns please visit the EAL Website www.eal.org.uk or contact our Customer Services department who can assist you.

Appendix 2: Functional Skills & Essential Skills Wales

Essential Skills Wales (ESW)

Essential skills Wales are a suite of qualifications to replace Key Skills in Wales. There are currently three ESW qualifications:

- Application of number (Aon),
- Communication,
- Information communication technology (ICT).

EAL offer these qualifications at levels one to three. These qualifications are 'stand alone' and are portfolio based; however these can be embedded into other qualifications but must remain a transferable skill.

DCELLS are currently reviewing Working with Others; Improving Ones own Learning and Problem Solving which will become part of a suite of six qualifications along with Application of Number, Communication and Information Communication Technology. These qualifications will available from September 2010. Currently the wider Key Skills are available until September 2012.

For further information essential skills Wales please visit the EAL website

Functional skills

If individuals don't achieve a level two functionality while at school; they will have other opportunities to do so at college, within an apprenticeship, or in an adult course on day release from work, whatever their age.

Functional Skills qualifications will replace existing Key Skills qualifications.

Functional Skills qualifications will be:

- a constituent of new Diplomas at every level,
- a replacement for Communication, AoN and ICT Key Skills qualifications part of Apprenticeship Frameworks
- part of Foundation Learning.

Each qualification is separate and assessed independently. The qualifications have been designed so that, at level two, learners are able to apply their skills confidently in a range of different contexts.

Functional Skills are already part of the Qualifications and Credit Framework (QCF) and have been allocated a credit value of five at the two Levels.

They will be accredited onto the National Qualifications Framework (NQF) for full rollout from September 2010.

For further information on functional skills and essential skills Wales and please visit the EAL website at www.eal.org.uk/

Appendix 3: Potential Sources of Teaching Information

There are a number of books CD ROMs, videos and web sites, which provide useful sources of teaching information to support this qualification. If you wish to suggest a publication, please contact:

Customercare@eal.org.uk

TBC

Appendix 4: Relation to National Occupational Standards

EAL's QETF Units are mapped to national occupational standards as shown:

EAL Code	Details of the relationship between the unit and relevant national occupational standards or other professional standards or curricula			
	PEO NOS ref	PMO NOS ref	MPAL NOS ref	
IEA/001	045NPEO_1v1	045NPMO2.01	032NMPA1	
IEA /002	045NPEO_3v1	045NME2.03	032NMPA2	
IEA /003	045NPEO_2v1	045NME2.03	032NMPA4	
IEA /004	045NPEO_2v1	045NME2.03	032NMPA2	
IEA /005	045NPEO_2v1	045NME2.03		
IEA /006			032NMPA3	
IEA /007			032NMPA3	

Appendix 5: Learner Registration & Certification

Learners must be registered with EAL on a code which relates to the qualification -this **must be** completed prior to assessment. Both learner registration and certification can be completed on line at the EAL Website www.eal.org.uk. For paper based registration and certification use forms CRF1, and CRF1A. These are located in the centre operations manual.

To Register the Learner on the Chosen Qualification/Pathway Code:

Qualification Title	Code
EAL Level 2 Certificate in Metals Industries Processes (QCF)	500/7998/0

Appendix 6: Unit Details

The following pages contain the qualification units.

Unit: IEA2/001 Understanding health and safety in an industrial environment



Unit details

Credit value	3	Guided learning hours	20
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Unit purpose/aims

This unit enables the learner to acquire the essential knowledge and understanding of the industrial environment in relation to the requirements of working safely and relevant health and safety legislation.

Summary of learning outcomes

The learner will:

- 1.1 Understand the responsibilities required to meet health and safety legislation and regulations
- 1.2 Understand hazards and risks in the workplace and how they are identified
- 1.3 Understand the need for and types of personal protective equipment
- 1.4 Understand fire emergency procedures in the workplace
- 1.5 Understand accident procedures and how they accidents are reported

Assessment requirements

An onscreen multiple choice examination covers the knowledge requirements for learning outcomes 1.1 - 1.5

Unit **Learning Outcomes 1 to 5**
IEA/001 *Assessment criteria of the learning outcomes*

To fully complete the learning outcomes all assessment criteria must be met.

Learning outcome	Assessment criteria
The learner will:	The learner can:
1. Understand the responsibilities required to meet health and safety legislation and regulations	1.1 Describe the responsibilities they have towards safety for themselves and others in the workplace 1.2 State the legislation that covers health and safety in the workplace
2. Understand hazards and risks in the workplace and how they are identified	2.1 Identify hazards and risks in the workplace 2.2 Describe actions that can be taken to reduce risks 2.3 Identify warning signs and symbols
3. Understand the need for and types of personal protective equipment	3.1 State why personal protective equipment is used 3.2 Describe the different types of personal protective equipment in use in an industrial environment
4. Understand fire emergency procedures in the workplace	4.1 Describe how evacuation procedures are displayed 4.2 State what elements need to be present for a fire to exist 4.3 Describe the location of different types of fire extinguishers and when they should be used
5. Understand accident procedures and how they accidents are reported	5.1 Describe why accidents and incidents must be reported 5.2 Describe how to report accidents and incidents 5.3 Identify where assistance to deal with injuries may be obtained from

Unit: IEA2/002 Understanding how to communicate in an industrial environment



Unit details

Credit value	3	Guided learning hours	20
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Unit purpose/aims

This unit enables the learner to develop an understanding of the types, methods and importance of effective communication in the industrial environment.

Summary of learning outcomes

The learner will:

- 2.1 Understand the importance of effective workplace communications
- 2.2 Understand how to communicate effectively
- 2.3 Understand the types of technical information found in the industrial workplace

Assessment requirements

An onscreen multiple choice examination covers the knowledge requirements for learning outcomes 2.1 - 2.3

Unit **Learning Outcomes 1 to 3**
IEA/002 *Assessment criteria of the learning outcomes*

To fully complete the learning outcomes all assessment criteria must be met.

Learning outcome	Assessment criteria
The learner will:	The learner can:
1. Understand the importance of effective workplace communications	1.1 Define workplace communications 1.2 State why good communications are important 1.3 Identify methods of communications used in the workplace and when appropriate to use them
2. Understand how to communicate effectively	2.1 Identify what needs to be considered before communicating verbally with others, to include: (a) language (b) pace (c) tone (d) timing 2.2 Describe why punctuation in written communications is important 2.3 Identify the considerations that need to be made when communicating with people external to the organisation
3. Understand the types of technical information found in the industrial workplace	3.1 Identify the types of technical information found in the industrial workplace 3.2 State why it is important to use correct terminology on technical information, to include: (a) drawing conventions (b) reference to standards

Unit: IEA2/003 Understanding working effectively in an industrial environment



Unit details

Credit value	2	Guided learning hours	10
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Unit purpose/aims

This unit enables the learner to develop an understanding of the importance of effective working and how they can make a contribution to an effective workplace.

Summary of learning outcomes

The learner will:

- 3.1 Understand how planning and preparation supports being effective in the workplace
- 3.2 Understand the importance of good housekeeping
- 3.3 Understand why performance reviews are important for effective working
- 3.4 Understand the importance of continuous personal development and objectives

Assessment requirements

An onscreen multiple choice examination covers the knowledge requirements for learning outcomes 3.1 - 3.4

Unit **Learning Outcomes 1 to 4**
IEA/003 *Assessment criteria of the learning outcomes*

To fully complete the learning outcomes all assessment criteria must be met.

Learning outcome	Assessment criteria
The learner will:	The learner can:
1. Understand how planning and preparation supports being effective in the workplace	1.1 Describe how to plan for working activities and the stages to be taken 1.2 Describe how to prepare for working activities and the methods employed
2. Understand the importance of good housekeeping	2.1 State the importance of good housekeeping and how to implement it 2.2 Describe some common work activities that come under the heading of 'housekeeping'
3. Understand why performance reviews are important for effective working	3.1 State why performance reviews are important 3.2 Describe the importance of feedback and how it is used in performance reviews
4. Understand the importance of continuous personal development and objectives	4.1 Explain why continuous personal development is important 4.2 Explain why objectives are important and how to set them

Unit: IEA2/004 Understanding working relationships in an industrial environment



Unit details

Credit value	2	Guided learning hours	10
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Unit purpose/aims

This unit enables to develop an understanding of the importance of effective working relationships and team working. It also enables an understanding of the discrimination legislation that applies to the workplace.

Summary of learning outcomes

The learner will:

- 4.1 Understand how attitude has an influence on behaviour
- 4.2 Understand the legislation that covers discrimination in the workplace
- 4.3 Understand the importance of creating and maintaining good working relationships
- 4.4 Understand the importance of effective team working

Assessment requirements

An onscreen multiple choice examination covers the knowledge requirements for learning outcomes 4.1 - 4.4

Unit **Learning Outcomes 1 to 4**
IEA/004 *Assessment criteria of the learning outcomes*

To fully complete the learning outcomes all assessment criteria must be met.

Learning outcome	Assessment criteria
The learner will:	The learner can:
1. Understand how attitude has an influence on behaviour	1.1 Describe what is meant by positive and negative thinking 1.2 State why it is important to keep a positive attitude in the workplace
2. Understand the legislation that covers discrimination in the workplace	2.1 Describe the legislation that covers discrimination in the workplace to include: (a) disability (b) race (c) sex (d) discrimination
3. Understand the importance of creating and maintaining good working relationships	3.1 State why it is important to create and maintain good working relationships 3.2 Identify common relationship problems and how to deal with them
4. Understand the importance of effective team working	4.1 Describe why team working is used within organisations 4.2 Describe what the features are of successful teams 4.3 Explain what the responsibilities of an individual are as an effective team member

Unit: IEA2/005 Understanding rights and responsibilities in an industrial environment



Unit details

Credit value	2	Guided learning hours	10
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Unit purpose/aims

This unit enables the learner to develop an understanding of the statutory employment rights and responsibilities that apply to the workplace, career development and the role of representative bodies.

Summary of learning outcomes

The learner will:

- 5.1 Understand the main statutory laws that have an effect on employment
- 5.2 Understand common topics found in a staff handbook
- 5.3 Understand how employment fits in to a career structure
- 5.4 Understand the role of representative bodies in the industrial environment

Assessment requirements

An onscreen multiple choice examination covers the knowledge requirements for learning outcomes 5.1 - 5.4

Unit **Learning Outcomes 1 to 5**
IEA/005 *Assessment criteria of the learning outcomes*

To fully complete the learning outcomes all assessment criteria must be met.

Learning outcome	Assessment criteria
The learner will:	The learner can:
1. Understand the main statutory laws that have an effect on employment	1.1 State the laws applicable to employment and what they briefly cover, to include: <ul style="list-style-type: none"> (a) The Employment Rights Act 1996 (b) The Working Time Regulations 1998 (c) The Health and Safety at Work Act 1974 (d) The Data Protection Act 1999
2. Understand common topics found in a staff handbook	2.1 State some of the common topics found in a staff handbook, to include: <ul style="list-style-type: none"> (a) Pay, benefits and hours of work (b) Holiday and other authorised time off (c) Sickness (d) Health, safety and welfare (e) Discipline and grievance (f) Joining and leaving procedures (g) Anti-discrimination and equal opportunities
3. Understand how employment fits in to a career structure	3.1 Describe career opportunities within an industrial environment 3.2 Describe the qualifications that support career development
4. Understand the role of representative bodies in the industrial environment	4.1 State what representative bodies there are in the learners particular industrial environment 4.2 Give a brief explanation of the activities that representative bodies in the industrial environment undertake

Unit: IEA2/006 Understanding the types, properties and applications of ferrous and non ferrous metals



Unit details

Credit value	3	Guided learning hours	20
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Unit purpose/aims

This unit enables the learner to acquire the essential knowledge and understanding of the types of ferrous and non ferrous commonly metals used. This includes understanding metal properties and how they have an effect on the applications the metals are put to.

Summary of learning outcomes

The learner will:

- 6.1 Understand the main types of metals in use in industry, their basic properties and applications
- 6.2 Understand the destructive and non destructive testing of metals

Assessment requirements

Learner pack assessments that cover 6.1 - 6.2

Unit **Learning Outcomes 1 to 2**
IEA/006 *Assessment criteria of the learning outcomes*

To fully complete the learning outcomes all assessment criteria must be met.

Learning outcome	Assessment criteria
The learner will:	The learner can:
1. Understand the main types of metals in use in industry, their basic properties and applications	1.1 Identify the major categories of steels 1.2 Describe the principal constituents of steels and their effects on metallurgical properties 1.3 List non-ferrous metals and their properties 1.4 State common applications of ferrous and non ferrous metals 1.5 Describe properties of materials and how they have an effect on applications
2. Understand the destructive and non destructive testing of metals	2.1 Describe the mechanical methods of testing metals including the properties that they are testing 2.2 Describe non destructive tests including the properties that they are testing 2.3 Describe the process of chemical analysis of a metal sample using a spectrometer

Unit: IEA2/007 Understanding primary and secondary metals industry processes



Unit details

Credit value	3	Guided learning hours	20
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Unit purpose/aims

This unit enables the learner to acquire the essential knowledge and understanding of the primary and secondary processes used to produce ferrous and non ferrous metals.

Summary of learning outcomes

The learner will:

- 7.1 Understand how ferrous and non ferrous metals are produced
- 7.2 Understand casting processes and hot working of metals
- 7.3 Understand the cold working of metals

Assessment requirements

Learner pack assessments that cover 7.1 - 7.3

Unit **Learning Outcomes 1 to 3**
IEA/007 *Assessment criteria of the learning outcomes*

To fully complete the learning outcomes all assessment criteria must be met.

Learning outcome	Assessment criteria
The learner will:	The learner can:
1. Understand how ferrous and non ferrous metals are produced	1.1 Describe how iron is made in a blast furnace 1.2 Describe how steel is made by the Basic Oxygen and the Electric Arc processes 1.3 Describe how copper is made from its low grade ore 1.4 Describe why the extraction of aluminium requires a large amount of electricity 1.5 Describe metal production from both metal ores and from metal recycling
2. Understand casting processes and hot working of metals	2.1 Describe die casting and continuous casting 2.2 Describe hot rolling of metals 2.3 Describe how forgings and pressings are produced 2.4 Describe tube making 2.5 Describe extrusion
3. Understand the cold working of metals	3.1 Label a sketch of a cold rolling mill and describe the properties of cold rolled metal 3.2 Label a sketch of a wire drawing machine 3.3 Describe the improvements made in properties of metals by wire drawing 3.4 Describe the main methods of machining metals 3.5 Describe coating of metals including galvanising

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