Level 2 Diploma in Jewellery Manufacturing (7679-04)

March 2014  Version 1.0
Qualification at a glance

<table>
<thead>
<tr>
<th>Subject area</th>
<th>Jewellery</th>
</tr>
</thead>
<tbody>
<tr>
<td>City &amp; Guilds number</td>
<td>7679</td>
</tr>
<tr>
<td>Age group approved</td>
<td>16+</td>
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<tr>
<td>Assessment</td>
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<tr>
<td>Support materials</td>
<td>Centre handbook</td>
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<tr>
<td>Registration and certification</td>
<td>Consult the Walled Garden/Online Catalogue for last dates</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Title and level</th>
<th>City &amp; Guilds number</th>
<th>Accreditation number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 2 Diploma in Jewellery Manufacturing</td>
<td>7679-04</td>
<td>601/3129/9</td>
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<td>Unit 218 Use tools to cut and pierce jewellery or silverware components</td>
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<td>Unit 219 Use tools to file jewellery or silverware components</td>
<td>23</td>
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<td></td>
<td>Unit 220 Use tools to produce formed jewellery or formed silverware components</td>
<td>25</td>
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<td></td>
<td>Unit 221 Use equipment to permanently join jewellery or silverware components</td>
<td>27</td>
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<td></td>
<td>Unit 222 Use hand and mechanical techniques to polish and finish jewellery or silverware components</td>
<td>29</td>
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<tr>
<td></td>
<td>Unit 223 Use tools to produce hand engraving on jewellery or silverware products</td>
<td>31</td>
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<td></td>
<td>Unit 224 Use techniques to identify and secure stones in settings in jewellery or silverware products</td>
<td>33</td>
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<td></td>
<td>Unit 225 Identify and explain methods and tools used in vitreous enamelling to produce jewellery or silverware products</td>
<td>35</td>
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<td>Unit 226 Identify how new and emerging technologies may impact on working practices in the jewellery industry</td>
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1 Introduction

This document tells you what you need to do to deliver the qualification:

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who is the qualification for?</td>
<td>It is for candidates who work or want to work as Jewellery Makers in the Jewellery manufacturing sector. This level is aimed at those learners who wish to enter a career in the Goldsmithing sector including many of the Allied trades. The qualification will provide proof of a basic practical ability, knowledge and understanding of a craft at a recognised standard, which will be attractive to any employer looking to take on an apprentice or improver.</td>
</tr>
<tr>
<td>What does the qualification cover?</td>
<td>It allows candidates to learn, develop and practise the skills required for employment and/or career progression in the Jewellery manufacturing sector. Practical skills are introduced and demonstrated for the learner to achieve a standard of competence. Underpinning this is an understanding of good workshop practice, ability to understand related Health &amp; Safety procedures, and theoretical aspects of the skills.</td>
</tr>
<tr>
<td>What opportunities for progression are there?</td>
<td>This qualification is part of the Jewellery manufacture Framework.</td>
</tr>
</tbody>
</table>
To achieve the **Level 2 Diploma in Jewellery Manufacturing**, learners must achieve **60 credits** from the mandatory units (214 – 226).

<table>
<thead>
<tr>
<th>Unit accreditation number</th>
<th>City &amp; Guilds unit number</th>
<th>Unit title</th>
<th>Credit value</th>
<th>Unit Level</th>
<th>GLH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mandatory</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L/506/1256</td>
<td>214</td>
<td>Contribute to keeping the workshop tidy and safe in jewellery, silversmithing and allied trades</td>
<td>3</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>M/506/1265</td>
<td>215</td>
<td>Interpret and produce jewellery manufacture or silversmithing drawings</td>
<td>5</td>
<td>2</td>
<td>35</td>
</tr>
<tr>
<td>K/506/1264</td>
<td>216</td>
<td>Mark out and measure materials for jewellery and silverware components</td>
<td>3</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>R/506/1274</td>
<td>217</td>
<td>Identify and use common precious metals and alloys in jewellery manufacture or silversmithing</td>
<td>4</td>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>H/506/1263</td>
<td>218</td>
<td>Use tools to cut and pierce jewellery or silverware components</td>
<td>5</td>
<td>2</td>
<td>38</td>
</tr>
<tr>
<td>A/506/1270</td>
<td>219</td>
<td>Use tools to file jewellery or silverware components</td>
<td>5</td>
<td>2</td>
<td>38</td>
</tr>
<tr>
<td>L/506/1273</td>
<td>220</td>
<td>Use tools to produce formed jewellery or formed silverware components</td>
<td>6</td>
<td>2</td>
<td>44</td>
</tr>
<tr>
<td>R/506/1257</td>
<td>221</td>
<td>Use equipment to permanently join jewellery or silverware components</td>
<td>6</td>
<td>2</td>
<td>41</td>
</tr>
<tr>
<td>D/506/1259</td>
<td>222</td>
<td>Use hand and mechanical techniques to polish and finish jewellery or silverware components</td>
<td>6</td>
<td>2</td>
<td>41</td>
</tr>
<tr>
<td>F/506/1271</td>
<td>223</td>
<td>Use tools to produce hand engraving on jewellery or silverware products</td>
<td>5</td>
<td>2</td>
<td>35</td>
</tr>
<tr>
<td>Y/506/1258</td>
<td>224</td>
<td>Use techniques to identify and secure stones in settings in jewellery or silverware products</td>
<td>6</td>
<td>2</td>
<td>47</td>
</tr>
<tr>
<td>Y/506/1261</td>
<td>225</td>
<td>Identify and explain methods and tools used in vitreous enamelling to produce jewellery or silverware products</td>
<td>4</td>
<td>2</td>
<td>30</td>
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<tr>
<td>D/506/1262</td>
<td>226</td>
<td>Identify how new and emerging technologies may impact on working practices in the jewellery industry</td>
<td>2</td>
<td>2</td>
<td>14</td>
</tr>
</tbody>
</table>
2 Centre requirements

Approval
There is no fast track approval for this qualification, existing centres who wish to offer this qualification must use the standard Qualification Approval Process.

To offer this qualification, new centres will need to gain both centre and qualification approval. Please refer to the Centre Manual - Supporting Customer Excellence for further information.

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification before designing a course programme.

Resource requirements

Centre staffing
Staff delivering this qualification must be able to demonstrate that they meet the following occupational expertise requirements. They should:

- be occupationally competent or technically knowledgeable in the area for which they are delivering training and/or have experience of providing training. This knowledge must be to the same level as the training being delivered
- have recent relevant experience in the specific area they will be assessing
- have credible experience of providing training.

Centre staff may undertake more than one role, eg tutor and assessor or internal quality assurer, but cannot internally verify their own assessments.

Assessors and Internal Quality Assurer
Assessor/Internal Quality Assurer TAQA qualifications are valued as qualifications for centre staff, but they are not currently a requirement for the qualification.

Continuing professional development (CPD)
Centres must support their staff to ensure that they have current knowledge of the occupational area, that delivery, mentoring, training, assessment and verification is in line with best practice, and that it takes account of any national or legislative developments.
Age restrictions
City & Guilds cannot accept any registrations for learners under 16 as this qualification is not approved for under 16s.
3 Delivering the qualification

Initial assessment and induction
An initial assessment of each learner should be made before the start of their programme to identify:

- if the learner has any specific training needs
- support and guidance they may need when working towards their qualification
- any units they have already completed, or credit they have accumulated which is relevant to the qualification
- the appropriate type and level of qualification.

We recommend that centres provide an induction programme so the learner fully understands the requirements of the qualification, their responsibilities as a learner, and the responsibilities of the centre. This information can be recorded on a learning contract.
4 Assessment

Candidates must:
- have a completed portfolio of evidence for each unit

Time constraints
The following must be applied to the assessment of this qualification:
- Candidates must finish their assessment within their period of registration

Assessment strategy
Units must be assessed in line with Creative and Cultural Skills Overarching Assessment Principles For Occupational Qualifications.

Recognition of prior learning (RPL)
Recognition of prior learning means using a person’s previous experience or qualifications which have already been achieved to contribute to a new qualification. RPL is not allowed for this qualification.
5 Units

Availability of units
All learning outcomes and assessment criteria for all the units are listed in the following section.

Structure of units
These units each have the following:
- City & Guilds reference number
- unit accreditation number (UAN)
- title
- level
- credit value
- guided learning hours
- unit aim
- relationship to NOS
- endorsement by a sector
- learning outcomes which are comprised of a number of assessment criteria.
## Summary of units

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
<th>UAN</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>214</td>
<td>Contribute to keeping the workshop tidy and safe in jewellery, silversmithing and allied trades</td>
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</tr>
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<td>M/506/1265</td>
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<td>216</td>
<td>Mark out and measure materials for jewellery and silverware components</td>
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<td>3</td>
</tr>
<tr>
<td>217</td>
<td>Identify and use common precious metals and alloys in jewellery manufacture or silversmithing</td>
<td>R/506/1274</td>
<td>4</td>
</tr>
<tr>
<td>218</td>
<td>Use tools to cut and pierce jewellery or silverware components</td>
<td>H/506/1263</td>
<td>5</td>
</tr>
<tr>
<td>219</td>
<td>Use tools to file jewellery or silverware components</td>
<td>A/506/1270</td>
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<tr>
<td>226</td>
<td>Identify how new and emerging technologies may impact on working practices in the jewellery industry</td>
<td>D/506/1262</td>
<td>2</td>
</tr>
</tbody>
</table>
Unit 214 Contribute to keeping the workshop tidy and safe in jewellery, silversmithing and allied trades

Learning outcome
The learner will:
1. understand why keeping the workshop tidy and safe is important

Assessment criteria
The learner can:
1.1 describe the importance of keeping the work area safe and tidy
1.2 define what ‘hazards’ are
1.3 define what ‘risks’ are
1.4 state which hazards and risks may exist within the workplace.

Learning outcome
The learner will:
2. know how to contribute to keeping the workshop tidy and safe

Assessment criteria
The learner can:
2.1 describe the safe working practices that should be followed in the workplace
2.2 identify the workplace procedures for dealing with and reporting risk
2.3 state the people responsible for health and safety in the workplace
2.4 state where people responsible for health and safety can be located in your workplace
2.5 describe the relevant manufacturer’s instructions for the safe use of materials and equipment that must be followed
2.6 state the importance of wearing personal protective clothing

Learning outcome
The learner will:
3. be able to contribute to keeping the workshop tidy and safe

Assessment criteria
The learner can:
3.1 ensure that they have sufficient clear bench space to safely carry out the work activities specified
3.2 identify any working practices relevant to the task that could harm themselves or others
3.3 demonstrate that they follow workplace instructions, suppliers and manufacturers’ instructions
3.4 demonstrate that they can remove and dispose of waste and surplus material correctly
3.5 leave the work area in a safe and tidy condition
3.6 wear the appropriate personal protective clothing.
Unit 215  Interpret and produce jewellery manufacture or silversmithing drawings

UAN: M/506/1265
Level: 2
Credit value: 5
GLH: 35
Relationship to NOS: This unit relates to NOS J2.2 Read jewellery manufacture or silversmithing drawings.
Endorsement by sector: This unit is endorsed by Creative and Cultural Skills.

Aim: This unit aims to assess the candidate’s ability to apply the skills and knowledge required for locating, reading and extracting information from drawings and specifications in accordance with approved procedures.

Learning outcome
The learner will:
1. know how to interpret and use drawings and specifications

Assessment criteria
The learner can:
1.1 describe how to interpret drawings in order to extract dimensions
1.2 describe the symbols used within drawings and specifications
1.3 define the terminology used within drawings and specifications
1.4 describe the conventions used within drawings and specifications
1.5 describe the extent of their own responsibility and to whom they should report when problems arise that they cannot resolve.

Learning outcome
The learner will:
2. be able to produce drawings and interpret information provided by others

Assessment criteria
The learner can:
2.1 produce and interpret technical drawings and specifications using a range of drawing and measuring tools including:
   a. Ruler
   b. Compass
   c. Set square
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<tbody>
<tr>
<td>d.</td>
<td>Protractor</td>
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<tr>
<td>e.</td>
<td>HB Pencil</td>
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<tr>
<td>f.</td>
<td>Eraser</td>
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</table>

2.2 follow instructions relating to work including:

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>a.</td>
<td>oral instructions</td>
</tr>
<tr>
<td>b.</td>
<td>written instructions</td>
</tr>
<tr>
<td>c.</td>
<td>drawn instructions</td>
</tr>
</tbody>
</table>

2.3 check that the finished work meets the specification.
Unit 216  Mark out and measure materials for jewellery and silverware components

UAN: K/506/1264
Level: 2
Credit value: 3
GLH: 24
Relationship to NOS: This unit relates to NOS J2.3 Mark out and measure materials for jewellery or silversmith components.

Endorsement by sector: This unit is endorsed by Creative and Cultural Skills.

Aim: This unit aims to assess the candidate’s ability to apply the skills and knowledge required for marking out and measuring materials that may be used in jewellery and silversmith components.

Learning outcome

The learner will:
1. understand the conventions of marking out and measuring materials for jewellery or silversmith components

Assessment criteria

The learner can:
1.1 explain the conventions used within a range of simple technical drawings
1.2 explain methods used to mark out and measure materials
1.3 describe measuring tools and equipment used to mark out materials.

Learning outcome

The learner will:
2. be able to mark out and measure materials for jewellery or silversmith components

Assessment criteria

The learner can:
2.1 identify common marking out and measuring tools including:
   a. Micrometers
   b. Vernier gauge, calliper
   c. Steel rule
   d. Steel dividers
2.2 perform marking out and measuring tasks in response to instructions including:
   a. Oral instructions
   b. Written instructions
   c. Drawn instructions
2.3 perform tasks using measuring tools and marking out equipment on metal surfaces to given specifications and dimensions in a way that avoids excessive waste

<p>| | |</p>
<table>
<thead>
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</table>
e. Scribe
f. Centre punch
# Unit 217

Identify and use common precious metals and alloys in jewellery manufacture or silversmithing

<table>
<thead>
<tr>
<th>UAN:</th>
<th>R/506/1274</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level:</td>
<td>2</td>
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<tr>
<td>Credit value:</td>
<td>4</td>
</tr>
<tr>
<td>GLH:</td>
<td>31</td>
</tr>
<tr>
<td>Relationship to NOS:</td>
<td>This unit relates to NOS J2.4 Identify the basic properties of common precious metals and alloys used in jewellery and silversmithing.</td>
</tr>
<tr>
<td>Endorsement by sector:</td>
<td>This unit is endorsed by Creative and Cultural Skills.</td>
</tr>
<tr>
<td>Aim:</td>
<td>This unit aims to assess the candidate’s knowledge of the properties and characteristics of the types of manufacturing materials commonly used in jewellery manufacturing and silversmithing and their ability to select, prepare and use materials for metalwork and jewellery.</td>
</tr>
</tbody>
</table>

## Learning outcome

The learner will:

1. know the properties of common precious metals used in jewellery manufacture or silversmithing

## Assessment criteria

The learner can:

1.1 state the commonly used precious metals and alloys in jewellery and silversmithing

1.2 identify the basic properties of a range of metals and alloys. Metals and alloys including:

   a. Gold
   b. Silver
   c. Platinum
   d. Palladium.
### Learning outcome
The learner will:
2. be able to select and prepare materials for metalwork and jewellery

### Assessment criteria
The learner can:
2.1 following instructions, select suitable materials for the required metalwork and jewellery
2.2 prepare the materials for metalwork and jewellery in response to instructions:
   a. Oral instructions
   b. Written instructions
   c. Drawn instructions.

### Learning outcome
The learner will:
3. be able to experiment with materials

### Assessment criteria
The learner can:
3.1 apply and experiment with specialist materials for metalworking and jewellery
3.2 record findings from experiments with precious metals and alloys.

### Learning outcome
The learner will:
4. understand the common terminology and regulation used in the workplace

### Assessment criteria
The learner can:
4.1 explain the common terminology used in your workplace
4.2 explain the Hallmarking Act and the implications it has upon operations.

### Learning outcome
The learner will:
5. know how to identify the properties of common precious metals and alloys

### Assessment criteria
The learner can:
5.1 describe how to identify common ferrous and non-ferrous alloys
5.2 describe the properties of jewellery and silversmith manufactured materials including:
   a. Strength
   b. Toughness
   c. Ductility
   d. Malleability
   e. Weight
   f. Surface treatment
g. Construction
h. Section thickness

5.3 describe the characteristics of jewellery and silversmith manufacturing materials including:
   a. Aesthetic qualities
   b. Ease of working
   c. Strengths and weaknesses
   d. Quality of finishes.
# Unit 218  
Use tools to cut and pierce jewellery or silverware components

<table>
<thead>
<tr>
<th>UAN:</th>
<th>H/506/1263</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level:</td>
<td>2</td>
</tr>
<tr>
<td>Credit value:</td>
<td>5</td>
</tr>
<tr>
<td>GLH:</td>
<td>38</td>
</tr>
<tr>
<td>Relationship to NOS:</td>
<td>This unit relates to NOS J2.5 Cut and pierce jewellery or silverware components.</td>
</tr>
<tr>
<td>Endorsement by sector:</td>
<td>This unit is endorsed by Creative and Cultural Skills.</td>
</tr>
<tr>
<td>Aim:</td>
<td>This unit aims to assess the candidate’s ability to apply the skills and knowledge required to identify and use the different types of equipment appropriate to cut and pierce materials in jewellery and silversmithing work places.</td>
</tr>
</tbody>
</table>

## Learning outcome
The learner will:
1. understand the importance of safe working when cutting and piercing

## Assessment criteria
The learner can:
1.1 state the risks that may be encountered when cutting and piercing items
1.2 explain how risks can be reduced when cutting and piercing items
1.3 describe the importance of keeping the work area safe and tidy.

## Learning outcome
The learner will:
2. know how to cut and pierce jewellery and silverware components

## Assessment criteria
The learner can:
2.1 describe the methods that can be used for marking out and drilling for piercing simple shapes and patterns
2.2 describe how to check that equipment is in a useable condition
2.3 describe how to cut sheet materials using appropriate cutting equipment
2.4 explain the type of saw and blade that should be used with different materials
2.5 describe the importance of retaining valuable waste material
2.6 describe the checks that should be used to ensure that piercing and cutting is accurate.

<table>
<thead>
<tr>
<th>Learning outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>The learner will:</td>
</tr>
<tr>
<td>3. be able to use tools to cut and pierce jewellery and silverware components</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessment criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>The learner can:</td>
</tr>
<tr>
<td>3.1 accurately follow instructions for cutting and piercing components including:</td>
</tr>
<tr>
<td>a. Oral instructions</td>
</tr>
<tr>
<td>b. Written instructions</td>
</tr>
<tr>
<td>c. Drawn instructions</td>
</tr>
<tr>
<td>3.2 select the correct saw and blades suited to the task including:</td>
</tr>
<tr>
<td>a. Piercing saw</td>
</tr>
<tr>
<td>b. Junior hacksaw</td>
</tr>
<tr>
<td>c. Standard hacksaw</td>
</tr>
<tr>
<td>3.3 cut for jewellery and silverware using a range of cutting tools including:</td>
</tr>
<tr>
<td>a. Hand shears</td>
</tr>
<tr>
<td>b. Guillotine</td>
</tr>
<tr>
<td>c. Bench shears</td>
</tr>
<tr>
<td>3.4 use a piercing saw frame with the appropriate saw blade to produce a range of shapes including:</td>
</tr>
<tr>
<td>a. Straight lines</td>
</tr>
<tr>
<td>b. Spiral</td>
</tr>
<tr>
<td>c. Round hole</td>
</tr>
<tr>
<td>d. Square hole</td>
</tr>
<tr>
<td>e. Symmetrical design fretwork</td>
</tr>
<tr>
<td>3.5 check finished work against specification.</td>
</tr>
</tbody>
</table>
Unit 219 Use tools to file jewellery or silverware components

<table>
<thead>
<tr>
<th>UAN:</th>
<th>A/506/1270</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level:</td>
<td>2</td>
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<tr>
<td>Credit value:</td>
<td>5</td>
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<tr>
<td>GLH:</td>
<td>38</td>
</tr>
<tr>
<td>Relationship to NOS:</td>
<td>This unit relates to NOS J2.6 File jewellery and silverware components.</td>
</tr>
<tr>
<td>Endorsement by sector:</td>
<td>This unit is endorsed by Creative and Cultural Skills.</td>
</tr>
<tr>
<td>Aim:</td>
<td>This unit aims to assess the candidate's ability to apply the skills and knowledge required to use different types of hand files in jewellery and silversmithing work places.</td>
</tr>
</tbody>
</table>

### Learning outcome
The learner will:
1. understand the importance of safe working practices when filing jewellery or silverware components

### Assessment criteria
The learner can:
1. state the risks that may be encountered when using files and filed materials
2. explain the impact that not following safety precautions may have upon both the individual and the business
3. describe the specific safety precautions to be taken when using files.

### Learning outcome
The learner will:
2. know how to file jewellery or silverware components

### Assessment criteria
The learner can:
2.1 describe how specifications and drawings should be referred to during the production of components
2.2 describe the methods used for filing flat, curved and even surfaces
2.3 describe how to assess and prepare files so that they are in a useable condition
2.4 describe how to conserve waste filings.
### Learning outcome

The learner will:
3. be able to use tools to file jewellery or silverware components

### Assessment criteria

The learner can:
3.1 follow instructions for filing jewellery or silverware components. Instructions should include:
   a. Oral instructions
   b. Written instructions
   c. Drawn instructions

3.2 select the correct hand file suited to the task including:
   a. Hand file
   b. Pillar file
   c. Three square file
   d. Four square file
   e. Rat tail file
   f. Sage leaf file

3.3 select the correct needle file suited to the task including:
   a. Barrette/safety back needle file
   b. Round needle file
   c. Three square needle file
   d. Four square needle file
   e. Sage leaf needle file

3.4 assess the condition of the file and prepare it for use

3.5 produce components to the specified standard including:
   a. flat surfaces and edges
   b. curved surfaces and edges
   c. double curvature forms.
**Unit 220**  
Use tools to produce formed jewellery or formed silverware components

<table>
<thead>
<tr>
<th>UAN:</th>
<th>L/506/1273</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level:</td>
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<td>Credit value:</td>
<td>6</td>
</tr>
<tr>
<td>GLH:</td>
<td>44</td>
</tr>
<tr>
<td>Relationship to NOS:</td>
<td>This unit relates to NOS J2.7 Produce formed jewellery or silverware components.</td>
</tr>
<tr>
<td>Endorsement by sector:</td>
<td>This unit is endorsed by Creative and Cultural Skills.</td>
</tr>
<tr>
<td>Aim:</td>
<td>This unit aims to assess the candidate's ability to apply the skills and knowledge produce components using forming tools and techniques in a jewellery or silversmithing work place.</td>
</tr>
</tbody>
</table>

### Learning outcome

The learner will:

1. understand the importance of safe working practice when producing formed components

### Assessment criteria

The learner can:

1.1 state the health and safety risks that may be encountered when producing formed jewellery or silverware components  
1.2 explain the impact that not following safety precautions may have upon both the individual and the business  
1.3 state the importance of keeping the work area safe and tidy.

### Learning outcome

The learner will:

2. understand how to form jewellery and silverware components

### Assessment criteria

The learner can:

2.1 describe how hand and machine forming tools should be effectively used and cared for  
2.2 describe the methods used for heating materials to anneal components before forming  
2.3 describe the typical faults that can occur with the operations and tools being used  
2.4 describe how to produce solid and hollow wire profiles
Learning outcome

The learner will:

3. be able to use tools to produce formed components

Assessment criteria

The learner can:

3.1 identify a range of hand and machine forming tools and equipment appropriate to the task

3.2 use hand forming tools to produce curved surfaces. Hand forming tools will include:
   a. Hammers
   b. Doming block and punches
   c. Swage blocks
   d. Simple chasing punches
   e. Mandrels, tribute and/or stakes

3.3 use hand and machine forming tools for flat surfaces. Hand and machine forming tools will include:
   a. Flat plates
   b. Sheet rolling mills
   c. Wire rolling mills

3.4 produce a range of simple formed components. Components to include:
   a. wire produced from small round and square drawplates up to 3mm
   b. wire produced from larger round and square drawplates from 3mm upwards
   c. sheet metal suitable for defined tasks using rolling mills

3.5 produce simple components using a mechanical press

3.6 follow work instructions correctly

3.7 assess the finished work against defined specifications.
# Unit 221
Use equipment to permanently join jewellery or silverware components

<table>
<thead>
<tr>
<th>UAN:</th>
<th>R/506/1257</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level:</td>
<td>2</td>
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<tr>
<td>Credit value:</td>
<td>6</td>
</tr>
<tr>
<td>GLH:</td>
<td>41</td>
</tr>
<tr>
<td>Relationship to NOS:</td>
<td>This unit relates to NOS J2.8 Carry out permanent joining of jewellery or silverware components.</td>
</tr>
<tr>
<td>Endorsement by sector:</td>
<td>This unit is endorsed by Creative and Cultural Skills.</td>
</tr>
<tr>
<td>Aim:</td>
<td>This unit aims to assess the candidate’s ability and understanding when using permanent joining techniques. This includes working to a specification, using a range of equipment and a variety of permanent joining techniques appropriate to the material being used and the style being produced.</td>
</tr>
</tbody>
</table>

## Learning outcome
The learner will:
1. understand the importance of safe working practice when joining components

## Assessment criteria
The learner can:
1.1 state the health and safety risks that may be encountered when permanently joining jewellery or silverware components
1.2 explain the impact that not following safety precautions may have upon both the individual and the business
1.3 state the importance of keeping the work area safe and tidy.

## Learning outcome
The learner will:
2. know how to permanently join jewellery or silverware components

## Assessment criteria
The learner can:
2.1 describe a range of joining techniques
2.2 identify soldering equipment appropriate to the task. Soldering equipment should include:
   a. Micro welder
b. Oxygen and gas or propane torch  
c. Natural gas and air (compressed or mouth blown torch)  
d. Laser welder  
e. Oxygen and acetylene torch
2.3 describe how to identify the materials to be joined and the relevant solder that should be used
2.4 describe the importance of heat, flux and solder when permanently joining jewellery and silverware components
2.5 describe the importance of dry assembling components prior to carrying out the joining operation
2.6 describe why pre-polishing of surfaces is important
2.7 state the indicators which show the point where the melting of solder occurs
2.8 state the methods to be used for checking finished work for faults.

<table>
<thead>
<tr>
<th>Learning outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>The learner will:</td>
</tr>
<tr>
<td>3. be able to join jewellery or silverware components</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessment criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>The learner can:</td>
</tr>
<tr>
<td>3.1 select and use soldering equipment appropriate to the task</td>
</tr>
<tr>
<td>3.2 produce components using permanently soldered joints to include:</td>
</tr>
<tr>
<td>a. Butt soldered joints</td>
</tr>
<tr>
<td>b. Multiple soldered joints</td>
</tr>
<tr>
<td>c. Long seamed soldered joints</td>
</tr>
<tr>
<td>3.3 evaluate finished work against defined specification.</td>
</tr>
</tbody>
</table>
Unit 222  Use hand and mechanical techniques to polish and finish jewellery or silverware components

<table>
<thead>
<tr>
<th>UAN:</th>
<th>D/506/1259</th>
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<tbody>
<tr>
<td>Level:</td>
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<td>Credit value:</td>
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</tr>
<tr>
<td>GLH:</td>
<td>41</td>
</tr>
<tr>
<td>Relationship to NOS:</td>
<td>This unit relates to NOS J2.9 Polish and finish jewellery or silverware components.</td>
</tr>
<tr>
<td>Endorsement by sector:</td>
<td>This unit is endorsed by Creative and Cultural Skills.</td>
</tr>
</tbody>
</table>

**Aim:**
This unit aims to assess the candidate's ability to use and understanding of hand and mechanical techniques when polishing and finishing jewellery or silverware components.

### Learning outcome
The learner will:
1. understand the safety precautions that should be followed when polishing and finishing jewellery or silverware

### Assessment criteria
The learner can:
1.1 state the specific safety precautions to be followed when using polishing machines
1.2 state the correct protective clothing and equipment that should be used
1.3 describe the importance of using protective clothing and equipment.

### Learning outcome
The learner will:
2. understand how to polish and finish jewellery or silverware components

### Assessment criteria
The learner can:
2.1 state the methods that can be used when preparing work for polishing and finishing
2.2 describe how polishing and finishing methods should be applied
| 2.3 | describe how a range of hand and mechanical polishing and finishing techniques should be used |
| 2.4 | state how to check and prepare polishing and finishing tools, materials and equipment |
| 2.5 | state how to recognise the typical faults associated with under prepared surfaces. |

### Learning outcome

The learner will:

3. be able to use techniques for polishing and finishing jewellery or silverware components

### Assessment criteria

The learner can:

3.1 prepare yourself and the work environment for polishing and finishing in line with safety requirements
3.2 polish a range of items relevant to your area of work using hand and mechanical techniques
3.3 finish a range of items relevant to your area of work using hand and mechanical techniques
3.4 produce a range of surface finishes which are both functional and decorative
3.5 complete work according to given instructions
3.6 assess the degree to which the surface treatment meets the required standard.
# Unit 223

Use tools to produce hand engraving on jewellery or silverware products

<table>
<thead>
<tr>
<th>UAN:</th>
<th>F/506/1271</th>
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</thead>
<tbody>
<tr>
<td>Level:</td>
<td>2</td>
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<tr>
<td>Credit value:</td>
<td>5</td>
</tr>
<tr>
<td>GLH:</td>
<td>35</td>
</tr>
<tr>
<td>Relationship to NOS:</td>
<td>This unit relates to NOS J2.10 Produce hand engraving.</td>
</tr>
<tr>
<td>Endorsement by sector:</td>
<td>This unit is endorsed by Creative and Cultural Skills.</td>
</tr>
</tbody>
</table>

## Aim:

This unit aims to assess the candidates ability and understanding when carrying out engraving on jewellery and silverware products, this includes using basic hand tools and working to a specification.

### Learning outcome

The learner will:

1. understand the importance of safe working practice when producing hand engraving

### Assessment criteria

The learner can:

1.1 state the risks that may be encountered when using engraving equipment and materials

1.2 explain the impact that not following safety precautions may have upon both the individual and the business.

### Learning outcome

The learner will:

2. know how to hand engrave jewellery or silverware products

### Assessment criteria

The learner can:

2.1 define the meaning of a range of terms used to describe engraving techniques and processes

2.2 describe how to accurately interpret drawings and specifications

2.3 state the importance of carrying out work in a particular sequence

2.4 identify the applications of different tools

2.5 describe how tools should be effectively maintained

2.6 describe how to accurately measure and mark out work pieces using appropriate equipment for the task
2.7 describe the different methods that can be used for securing work pieces
2.8 identify the limitations of different methods that can be used to secure work.

**Learning outcome**

The learner will:
3. be able to use tools to hand engrave jewellery or silverware products

**Assessment criteria**

The learner can:
3.1 interpret drawings and specifications
3.2 plan a sequence of activities
3.3 select appropriate tools to achieve the specified outcome
3.4 check that tools are in an appropriate condition for use
3.5 measure and mark out the intended task prior to engraving
3.6 position and hold the work piece in place without causing damage
3.7 implement the task according to operating procedures
3.8 polish and finish the work using specified techniques.
### Unit 224
Use techniques to identify and secure stones in settings in jewellery or silverware products

<table>
<thead>
<tr>
<th>UAN:</th>
<th>Y/506/1258</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level:</td>
<td>2</td>
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<tr>
<td>Credit value:</td>
<td>6</td>
</tr>
<tr>
<td>GLH:</td>
<td>47</td>
</tr>
<tr>
<td>Relationship to NOS:</td>
<td>This unit relates to NOS J2.11 Identify and secure stones in settings.</td>
</tr>
<tr>
<td>Endorsement by sector:</td>
<td>This unit is endorsed by Creative and Cultural Skills.</td>
</tr>
<tr>
<td>Aim:</td>
<td>This unit aims to assess the candidate's ability and understanding when securing gems in settings. It requires that the candidate can identify a range of setting styles and a range of gem materials and secure stones in commonly used settings.</td>
</tr>
</tbody>
</table>

#### Learning outcome
The learner will:
1. understand the importance of safe working practice when setting

#### Assessment criteria
The learner can:
1.1 state the risks that may be encountered when using setting equipment and materials
1.2 explain the impact that not following safety precautions may have upon both the individual and the business

#### Learning outcome
The learner will:
2. be able to identify a range of gem cuts and basic gem properties, and know the appropriate stone setting styles for these.

#### Assessment criteria
The learner can:
2.1 identify a range of gem cuts and basic gem properties
2.2 identify a range of stone setting styles appropriate to the above.
<table>
<thead>
<tr>
<th><strong>Learning outcome</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The learner will:</td>
</tr>
<tr>
<td>3. be able to secure stones in commonly used settings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Assessment criteria</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The learner can:</td>
</tr>
<tr>
<td>3.1 secure stones in commonly used settings</td>
</tr>
<tr>
<td>settings to include:</td>
</tr>
<tr>
<td>a. Rub over setting</td>
</tr>
<tr>
<td>b. Thread and grain</td>
</tr>
<tr>
<td>c. Star setting</td>
</tr>
<tr>
<td>d. Pavee setting</td>
</tr>
<tr>
<td>e. Simple claw settings</td>
</tr>
</tbody>
</table>
# Unit 225

**Identify and explain methods and tools used in vitreous enamelling to produce jewellery or silverware products**

<table>
<thead>
<tr>
<th>UAN:</th>
<th>Y506/1261</th>
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</thead>
<tbody>
<tr>
<td>Level:</td>
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<td>Credit value:</td>
<td>4</td>
</tr>
<tr>
<td>GLH:</td>
<td>30</td>
</tr>
<tr>
<td>Relationship to NOS:</td>
<td>This unit relates to NOS J2.12 Identify and explain methods and tools used in vitreous enamelling.</td>
</tr>
<tr>
<td>Endorsement by sector:</td>
<td>This unit is endorsed by Creative and Cultural Skills.</td>
</tr>
</tbody>
</table>

**Aim:**

This unit aims to assess the candidate's ability and understanding when working with hand tool applications to carry out enamelling.

**Learning outcome**

The learner will:

1. understand the importance of safe working practice when undertaking vitreous enamelling

**Assessment criteria**

The learner can:

1.1 state the health and safety risks that may be encountered when using vitreous enamelling to produce jewellery or silverware products

1.2 explain the impact that not following safety precautions may have upon both the individual and the business

1.3 state the importance of keeping the work area safe and tidy

1.4 state the health and safety procedures that should be followed when maintaining the usage and storage of chemicals.

**Learning outcome**

The learner will:

2. understand how to identify key components used in enamelling processes

**Assessment criteria**

The learner can:

2.1 describe how enamelling tools should be used
2.2 describe how enamelling kilns should be used
2.3 define the common terminology used within enamelling activities
2.4 define the differences between opaque, transparent and opalescent enamel
2.5 describe how to interpret drawings and specifications
2.6 describe the importance of carrying out work in a defined sequence
2.7 describe how different tools that can be used in enamelling processes
2.8 describe the applications of different enamelling tools.

<table>
<thead>
<tr>
<th>Learning outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>The learner will:</td>
</tr>
<tr>
<td>3. be able to enamel using appropriate methods and tools to produce jewellery or silverware products</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessment criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>The learner can:</td>
</tr>
<tr>
<td>3.1 select and use the most appropriate method of enamelling for a range of applications. Methods of enamelling to include:</td>
</tr>
<tr>
<td>a. Dry sifting</td>
</tr>
<tr>
<td>b. Wet packing</td>
</tr>
<tr>
<td>c. Liquid enamels</td>
</tr>
<tr>
<td>3.2 identify a range of enamelling techniques including:</td>
</tr>
<tr>
<td>a. Flat surface enamelling</td>
</tr>
<tr>
<td>b. Counter enamelling</td>
</tr>
<tr>
<td>3.3 identify a range of tools used in enamelling processes</td>
</tr>
<tr>
<td>3.4 identify the key components of a kiln.</td>
</tr>
</tbody>
</table>
Unit 226
Identify how new and emerging technologies may impact on working practices in the jewellery industry

UAN: D/506/1262
Level: 2
Credit value: 2
GLH: 14
Relationship to NOS: This unit relates to NOS J2.13 Identify new and emerging technologies in the jewellery industry, allied trades and how they may impact on your working practices.
Endorsement by sector: This unit is endorsed by Creative and Cultural Skills.
Aim: This unit aims to assess the candidate’s ability and understanding to develop and maintain an awareness of the jewellery industry, allied trades and how to develop their own skills to enable them to use related new techniques and technologies.

Learning outcome
The learner will:
1. know how to identify and respond to new and emerging technologies in the jewellery industry

Assessment criteria
The learner can:
1.1 explain the importance of keeping abreast of current and emerging technologies and new working practices
1.2 identify where information about emerging technologies and new working practices can be sourced
1.3 describe the impact that existing and emerging technology may have upon future working practices
1.4 provide examples of existing and emerging technologies
1.5 explain how to develop personal contacts to form networks to support and inform their work activities
1.6 describe the different types of skills development available and what would best meet their needs.
Appendix 1 Relationships to other qualifications

Literacy, language, numeracy and ICT skills development

This qualification can develop skills that can be used in the following qualifications:

- Functional Skills (England) – see www.cityandguilds.com/functionalskills
- Essential Skills (Northern Ireland) – see www.cityandguilds.com/essentialskillsni
- Essential Skills Wales – see www.cityandguilds.com/esw
Appendix 2  Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the Centres and Training Providers homepage on www.cityandguilds.com.

Centre Manual - Supporting Customer Excellence contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve ‘approved centre’ status, or to offer a particular qualification, as well as updates and good practice exemplars for City & Guilds assessment and policy issues. Specifically, the document includes sections on:

- The centre and qualification approval process
- Assessment, internal quality assurance and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Management systems
- Maintaining records
- Assessment
- Internal quality assurance
- External quality assurance.

Our Quality Assurance Requirements encompasses all of the relevant requirements of key regulatory documents such as:

- Regulatory Arrangements for the Qualifications and Credit Framework (2008)
- SQA Awarding Body Criteria (2007)
- NVQ Code of Practice (2006)

and sets out the criteria that centres should adhere to pre and post centre and qualification approval.
Access to Assessment & Qualifications provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The centre homepage section of the City & Guilds website also contains useful information on such things as:

- **Walled Garden**: how to register and certificate candidates on line
- **Qualifications and Credit Framework**: general guidance about the Framework and how qualifications will change, as well as information on the IT systems needed and FAQs
- **Events**: dates and information on the latest Centre events
- **Online assessment**: how to register for e-assessments.
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www.cityandguilds.com
# Useful contacts

| UK learners | T: +44 (0)844 543 0033  
| General qualification information | E: learnersupport@cityandguilds.com |
| International learners | T: +44 (0)844 543 0033  
| General qualification information | F: +44 (0)20 7294 2413  
| E: intcg@cityandguilds.com |
| Centres | T: +44 (0)844 543 0000  
| Exam entries, Certificates, Registrations/enrolment, Invoices, Missing or late exam materials, Nominal roll reports, Results |
| Single subject qualifications | T: +44 (0)844 543 0000  
| Exam entries, Results, Certification, Missing or late exam materials, Incorrect exam papers, Forms request (BB, results entry), Exam date and time change |
| International awards | T: +44 (0)844 543 0000  
| Results, Entries, Enrolments, Invoices, Missing or late exam materials, Nominal roll reports |
| Walled Garden | T: +44 (0)844 543 0000  
| Re-issue of password or username, Technical problems, Entries, Results, e-assessment, Navigation, User/menu option, Problems |
| Employer | T: +44 (0)121 503 8993  
| Employer solutions, Mapping, Accreditation, Development Skills, Consultancy |
| Publications | T: +44 (0)844 543 0000  
| Logbooks, Centre documents, Forms, Free literature |

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