Occupational Standards for Caribbean Vocational Qualifications (CVQ)

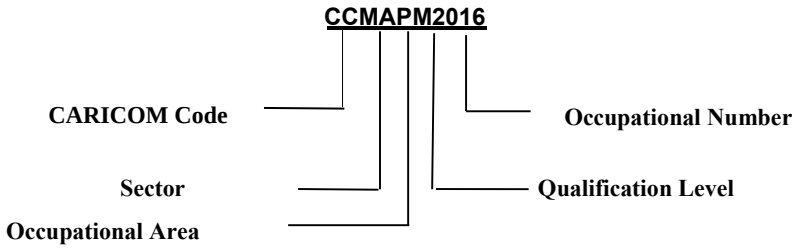
CCMAPM2016 CVQ Level 2 – JEWELLERY PRODUCTION (PRECIOUS METALS)

Unit Number	Unit Title	Requirement
MA00506	Follow health, safety and security procedures	Mandatory
BS00130	Work with others	Mandatory
MA00516	Apply drawing and rendering techniques to jewellery or object design	Mandatory
PGPCOR0111A	Plan and organise work	Mandatory
MA00507	Create jewellery design	Mandatory
MA00512	Identify precious metal jewellery through basic testing	Mandatory
MA00513	Produce precious metal jewellery	Mandatory
MA00515	Finish precious metal jewellery	Mandatory

To obtain a Caribbean Vocational Qualification (CVQ) all Mandatory Units must be achieved.

Legend to Occupational Standard code

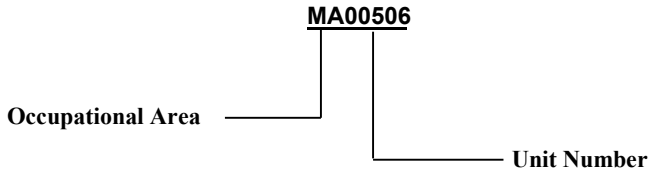
Example: CCMAPM2016



Key: CC – CARICOM; MA – Manufacturing Sector; PM – Jewllery Production (Precious Metals); 2 - Level 2; 016 - Numerical sequence

Legend to Unit Code

Example: MA00506



Key: MA – Manufacturing Sector; 00506 – unit #

Country of origin: Trinidad and Tobago

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Qualification Overview

Occupational Standards can also be used to:

- Prepare job descriptions and specifications
- Determine recruitment criteria
- Appraise staff performance objectively
- Identify skill and training gaps and needs
- Conduct labour market analyses
- Develop curriculum
- Assess the effectiveness of training programmes
- Determine compensation and rewards

The benefits of acquiring the CVQ to Candidates

- Provide a basis for articulation and accreditation
- Provides a broad-based preparation for employment
- Is an alternative route to further / higher education
- Complements and has parallel standing with academic qualifications
- Provides enhanced employability and higher earning potential
- Facilitates an apprenticeship with actual work experience
- Equips candidates with the knowledge, skills and attitudes for the workplace
- Past work experience and skills can count towards achieving the CVQ
- Allows for continuity whereby if a candidate cannot complete the CVQ at a centre or school, they can continue at another approved centre
- CVQ's are recognized qualifications and facilitates free movement of labour throughout CARICOM

The benefits of the CVQ to Employers

- Provides a larger cadre of skilled employees/candidates to choose from
- Reduces cost of recruiting and selecting the ideal job candidate
- Reduces cost for training workers
- Ensures higher levels of productivity

The benefits of the CVQ to the Caribbean region:

- Produces a higher skilled workforce that is ready to adapt to ever-changing global demands
- Provides greater access for persons to achieve higher qualifications
- Contributes to the region's human resource capacity development

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MA00506 Follow Health, Safety and Security Procedures

Unit Descriptor:

This unit deals with the skills and knowledge required to work safely in the workplace and applies to all individuals operating in a workshop environment.

ELEMENTS		PERFORMANCE CRITERIA	
	Candidates must be able to:		
1	Follow workplace health, safety and security procedures	1.1	Follow health, safety and security procedures and comply in accordance with enterprise policies, relevant regulations, insurance requirements and safety plan
		1.2	Identify breaches of health, safety and security procedures and promptly report them according to enterprise policy
		1.3	Carry out all work activities in a manner that is safe and does not present a hazard to fellow workers and the public
		1.4	Use sufficient clear workbench space to safely carry out work activities according to enterprise safety guidelines
		1.5	Interpret safety symbols and signs and follow safety instructions according to health and safety guidelines
		1.6	Remove and dispose of waste and surplus materials at the end of the activities and leave the work area in a safe and tidy condition
2	Deal with emergency situations	2.1	Recognise potential hazards and promptly determine required action within scope of individual responsibility
		2.2	Follow emergency procedures in accordance with enterprise procedures and guidelines
		2.3	Seek assistance promptly from colleagues and/or other authorities where appropriate
		2.4	Report details of emergency situations in accordance with enterprise policies and guidelines.
3	Maintain personal safety standards	3.1	Use the appropriate safety clothing, footwear and personal protective equipment in accordance with organisation policies and guidelines
		3.2	Use appropriate measures to prevent personal injury or impairment resulting from work activities and to control work hazards in accordance with enterprise and safety

			requirements
		3.3	Lift and handle objects in accordance with legal requirements, enterprise policies and relevant health and safety guidelines
		3.4	Prevent movements of the body that may cause risk to self in accordance with safety principles and enterprise requirements
		3.5	Use appropriate strategies to maintain fitness and to counter possible injury from overexertion
		3.6	Plan adequate rest breaks to maintain work performance and to counter stress and anxiety that may be experienced in working schedule
		3.7	Contribute and assist towards maintaining the workplace in a safe condition at all times in accordance with organisational and safety requirements
4	Provide feedback on health, safety and security	4.1	Promptly identify health, safety and security issues requiring attention according to health and safety guidelines
		4.2	Raise health, safety and security issues with the designated person in accordance with enterprise and legislative requirements

RANGE STATEMENT

All range statements must be assessed:

1. Workplace includes:

- established corporations
- home-based operations
- small enterprises
- one-man operations

2. Personal Protective Equipment includes:

- safety glasses/goggles
- gloves
- aprons
- footwear
- protective clothing

3. Potential hazards include:

- slippery floors
- unprotected equipment
- unsecured electrical outlets and cables
- obstacles in walkways
- spilled chemicals
- noise and smoke

4. Health, safety and security procedures include:

- emergency, fire and accident
- hazard identification and control
- use of personal protective clothing and
- equipment
- safe sitting, lifting and handling
- security of documents, cash, equipment, people
- key control systems
- safe use of electrical equipment
- use of material safety data sheets
- safe use of chemicals and toxic substances

5. Workplace procedures include:

- safety
- process-specific procedures
- use of materials
- recycling
- cost control
- reporting

6. Areas of the body affected by common injuries include:

- lower back
- ankle and foot
- knee
- muscles and tendons
- ligaments
- joints
- stress fractures

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. what are relevant Occupational Health and Safety legislation and codes of practice
2. what are major safety requirements for work environment
3. what are the organisational health, safety and security procedures
4. what are the symbols used for Occupational Safety and Health signs
5. what are major causes of workplace accidents
6. what are workplace hazards
7. what are the types and usage of personal protective gear and equipment
8. what are the safety requirements relating to handling and usage of tools, equipment and materials
9. what are the emergency evacuation procedures
10. what are fire hazards and workplace fire hazard minimisation procedures
11. what is a safety report and safety implementation reports
12. who are the designated personnel responsible for Occupational Safety and Health
13. how to identify major causes of workplace accidents relevant to the work environment
14. how to deal with emergency situations
15. how to communicate effectively

EVIDENCE GUIDE

(1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

a. follow established safety and security procedures and understanding of the
b. implications of disregarding those procedures
c. demonstrate knowledge of the industry guidelines and relevant legislative and
d. insurance requirements
e. demonstrate understanding of the legal requirement to work in accordance with health, safety and security procedures
f. perform work activities in conformance with safety requirements and maintain personal safety
g. maintain a safe work environment and report safety and security issues according to enterprise policy
h. accurately interpret safety symbols and signs
i. demonstrate the ability to explain safety procedures to others and deal with emergency situations
j. adhere to enterprise policies and procedures

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate

BS00130 Work with Others

Unit Descriptor:

This unit deals with the skills and knowledge needed to work harmoniously and effectively with team members, colleagues and others in a work environment.

ELEMENTS	PERFORMANCE CRITERIA
Candidates must be able to:	
1 Participate in the work/group process	1.1 Identify the work requirements for the group in accordance with established procedures
	1.2 Identify individual role in meeting work requirements and perform to expectations
	1.3 Provide assistance to other team members involved in the work group/process and provide constructive contributions to meet working requirements
	1.4 Conduct work activities in compliance with the organisations work policies, procedures and conventions covering acceptable workplace conduct
2 Contribute to the flow of information and ideas	2.1 Share information and ideas relevant to the work activity with others
	2.2 Seek assistance from appropriate persons for information and ideas required to achieve work requirements
	2.3 Record information in the required detail where necessary
3 Deal effectively with issues and problems and conflicts	3.1 Identify and report where necessary any issues, problems and conflicts encountered in the workplace to the relevant persons
	3.2 Discuss problems and conflicts with team members and suggest solutions

RANGE STATEMENT

All range statements must be assessed:

Working with others include:

- one to one communication in a group or team
- taking part in informal discussions
- following instructions
- consulting with the community
- taking part in meetings
- dealing with conflict

Work requirements include:

- goals and objectives
- priorities
- specified targets or results
- clear role definitions
- application of particular procedures

Groups include:

- established or ad hoc work units
- working parties
- task forces
- committees
- self directed teams

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. what are their individual roles, responsibilities and relationships with others
2. what are the different techniques for managing own work load
3. what are effective communication techniques
4. what are the different conflict resolution techniques

EVIDENCE GUIDE

1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

- participate in work process and contribute to achieving goals and objectives
- communicate effectively with others within the range of situations required for the job role
- provide ideas, lend assistance to others and resolve conflicts
- apply different communication techniques including active listening, questioning and non verbal communication

2) Method of Assessment

Assessors should gather a range of evidence, over a period of time, which is valid, sufficient and authentic. Evidence should be gathered through a variety of ways including direct observation and oral questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to

any relevant workplace procedures, manufacturer's specifications, codes, standards, manuals and reference materials.

3) Context of Assessment

This unit may be assessed on the job or off the job. Where assessment is done off the job, an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by working individually or in teams

MA00516 Apply Drawing and Rendering Techniques to Jewellery or Object Design

Unit Descriptor:

This unit deals with the skills and knowledge required to use various drawing techniques in the jewellery or object design creative process. The unit covers conventions, language and forms of drawings and the role of drawings in communicating the tactile, visual and spatial features of a design.

ELEMENTS		PERFORMANCE CRITERIA	
	Candidates must be able to:		
1	Use drawing and rendering techniques to explore design options	1.1	Use drawing techniques to communicate design features and intent of drawing according to industry principles
		1.2	Create design options by experimenting with expressive and gestural drawings
		1.3	Use and sample marks, mark making and surface qualities in drawing to create design
2	Display tactile and visual qualities of drawing subject	2.1	Use body, hand and eye coordination in relation to the act of drawing from observation according to industry guidelines
		2.2	Complete an analysis of jewellery or object drawings using visual elements in line with industry design principles
		2.3	Display real and implied texture in design according to industry design principles
3	Manipulate black and white and coloured drawing media in a creative and sensitive manner	3.1	Explore and use a range of media to develop design options according to industry practices
		3.2	Explore and use a range of colour media appropriate to develop design options
		3.3	Use a range of papers and surfaces appropriate to development of design options
4	Use principles of perspective to illustrate spatial illusion	4.1	Use principles of perspective to enhance the spatial illusion of jewellery or objects in space
		4.2	Complete freehand perspective drawings showing evidence of an understanding of single, two and three point perspective
		4.3	Illustrate views and projections appropriate to design according to industry design principles

4.4 Apply principles of monocular depth cues in drawings to enhance the spatial illusion of jewellery or objects in space according to industry design principles

RANGE STATEMENT

All range statements must be assessed:

1. Drawing techniques include:

- analytical
- observational
- imaginative

2. Design features include:

- materials
- dimensions
- context
- purpose

3. Rendering includes:

- the pictorial representation of objects using visual elements to provide depth and photo-like drawings including:
  - point
  - line
  - plane
  - shape
  - form
  - colour

4. Media, materials and drawing surfaces include:

- pencils
- ink (brush, pen and wash)
- charcoal (natural and compressed)
- conte
- crayon
- gouache
- coloured pencils
- felt tip markers
- paper (a range of weights, textures and colours)
- collage
- paints

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. what is the language and form of drawing and rendering
2. what are the types and characteristics of media, materials and drawing surfaces
3. what are the drawing equipment and applications, storage and maintenance
4. what is the role of point, line, shape, plane and form in drawing and rendering
5. what are the elements and principles of design
6. what are the mathematical procedures for estimation and measurement
7. what are 2D and 3D drawing techniques
8. what are the Occupational Safety and Health (OHS) requirements
9. how to explore, select and manipulate a range of media, materials and drawings
10. how to explore marks and mark making
11. how to draw from observation
12. how to use perspective in drawing

13. how to apply a range of drawing techniques, such as line drawing, contour drawing and gesture drawing
14. how to draw to create spatial illusion
15. how to use shape, plane and volume in drawing and rendering
16. how to create texture in drawing (real and implied)
17. how to apply black and white and coloured rendering techniques
18. how to apply composition techniques
19. how to apply rendering applications and techniques and tools for the creation of illustration effects
20. how to express self through intuitive and expressive drawing

EVIDENCE GUIDE

(1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

a. use drawing techniques to demonstrate features of jewellery or object design
b. use drawing tools, materials and techniques to communicate the design features
c. produce drawings using black, white and colour media

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate

PGPCOR0111A: Plan and Organise work

Unit Descriptor:

This unit deals with the skills and knowledge required to plan and organise work activities.

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1.	Identify task requirements of work activities	1.1	Procedural instructions are obtained, interpreted and clarified with appropriate personnel.
		1.2	Relevant specifications for task outcomes are obtained, interpreted and confirmed with appropriate personnel.
		1.3	Quality and quantity of work are identified in accordance with enterprise requirements.
2.	Plan and sequence steps to complete tasks	2.1	The individual steps or activities are determined based on interpretations of instructions and specifications and verified.
		2.2	Planned steps and outcomes are checked to ensure conformity with instructions and relevant specifications.
		2.3	Means of identifying conformity of planned steps and outcomes with instructions and relevant specifications are identified in accordance with company procedures.
		2.4	Sequence of required activities is identified in the plan in accordance with organization requirements.
		2.5	Work plan is presented for approval from supervisor.
3.	Implement and review job plan	3.1	Task is executed in accordance with the plan and organisation's requirements.
		3.2	Outcomes are identified and compared with planned objectives, task instructions and specifications to ensure all requirements are met.

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3.3 Work outcome are checked for compliance with quality requirements and any deficiencies are corrected.

3.4 The plan is revised, if necessary, based on the comparison of planned and actual outcomes to improve the achievement of objectives and task requirements.

RANGE STATEMENT .

This unit applies to activities associated with the essential operations linked to plan and organise work activities.

Work activities may include:

- daily routines
- periodic routines
- ad hoc activities
- special projects

Planning of work activities may include:

- interpretation of instructions and directions
- timelines
- productivity requirements
- interaction and communication with other team members and individuals
- interpretation of organization and statutory requirements
- applying quality requirements
- apply customer service requirements

Organizational policies and procedures may relate to**:**

- policies and procedures
- use, maintenance and storage of tools, items, materials and equipment
- regularity of cleaning and checking
- disposal of waste materials
- presentation of public areas
- work schedules
- problem-solving
- work roles and responsibilities
- documentation and reporting

Correcting deficiencies may include:

- reworking
- making necessary adjustments to product
- making approved adjustments to work process

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EVIDENCE GUIDE

Competency is to be demonstrated by the ability to plan and organize work in accordance with the performance criteria and the range listed within the range of variables statement.

(1) Critical Aspects and Evidence

It is essential that competence be observed in the following aspects:

- demonstrate knowledge of development of work plan, organization's processes and procedures and sequencing tasks
- identify, interpret and understand work instructions
- assess instructions and sequence steps to achieve required outcomes
- apply time management and resource management skills
- compliance with organisation's policies, guidelines and procedures
- work in accordance with safety and quality requirements

(2) Pre-requisite Relationship of Units

The pre-requisite for this unit is:

- Nil

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(3) Underpinning Knowledge and Skills

Knowledge
Knowledge of:

- procedures and processes used in the workplace
- time management and work organization principles
- working in a team and workplace communication
- oh&s and legislative requirements related to daily work
- typical problems related to specific work areas, appropriate ways of avoiding them and suitable solutions
- development of work plan
- disaggregating work assignments into series of tasks
- typical maintenance methods and schedules related to specific work processes and procedures
- relevant machinery and equipment maintenance according to organizational policies and procedures, and manufacturer's specifications
- resource requirements to complete activities
- planning and time management
- efficiency and productivity

Skills
The ability to:

- interpret work assignments
- communicate effectively
- plan work
- implement and review plan
- work safely
- manage time and resources
- solve problems

(4) Resource Implications

The following resources should be made available:

- workplace (actual enterprise or simulated)
- relevant resources
- work instructions
- relevant forms and report format
- organisational policies, regulations and guidelines
- relevant laws and legal requirements

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(5) Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Evidence may be collected in a variety of ways including:

- direct observation
- oral questioning
- written tests
- case studies
- evaluation of work done
- evaluation of workplace records, job documents and performance appraisals
- testimonials from clients
- portfolio of evidence of previous works and qualifications
- authenticated assessments and/or assignments from relevant training courses
- supporting statement from supervisor or previous employer

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Simulated activities must closely reflect the workplace.

(6) Context of Assessment

Assessment may take place on the job, off the job or a combination of both of these. However, assessment of this unit would most effectively be undertaken on the job due to the specific workplace environment requirements. Off the job assessment must be undertaken in a closely simulated workplace environment.

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CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1	Level 2	Level 3
• Carries out established processes • Makes judgement of quality using given criteria	• Manages process • Selects the criteria for the evaluation process	• Establishes principles and procedures • Evaluates and reshapes process • Establishes criteria for evaluation

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

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MA00507 Create Jewellery Design

Unit Descriptor:

This unit deals with the skills and knowledge required to create a jewellery design. It includes research of various techniques and media for the realisation of jewellery, development of a conceptual vision for jewellery and the application of various rendering techniques to create jewellery design.

ELEMENTS		PERFORMANCE CRITERIA	
	Candidates must be able to:		
1	Research jewellery making techniques and media	1.1	Identify relevant sources of information on history and theory and apply to the development of jewellery design
		1.2	Research and use relevant ideas and approaches from other practitioners with consideration of intellectual property, moral rights and copyright requirements
		1.3	Use new approaches to jewellery making based on capabilities of techniques already used
		1.4	Select or adapt new materials, tools, equipment or technology for the achievement of different effects
		1.5	Research and access potential sources of supply for jewellery making according to enterprise guidelines
2	Develop a conceptual vision for jewellery design	2.1	Develop a conceptual vision for jewellery design based on a knowledge and understanding of different jewellery making techniques
		2.2	Select techniques, materials, tools and equipment to achieve design concept according to industry standards
		2.3	Refine the design concept based on ongoing experimentation and analysis of jewellery making techniques
		2.4	Evaluate cost or other constraints which may impact on the development of work according to enterprise guidelines
3	Apply rendering techniques to explore design options	3.1	Apply techniques based on results of research to achieve design concept according to enterprise guidelines
		3.2	Explore design options through a variety of methods according to industry guidelines
		3.3	Select and use different media, materials and tools and use their features in accordance with industry procedures

RANGE STATEMENT

All range statements must be assessed:

1. Jewellery making techniques include:

- firing
- embossing
- engraving
- etching
- fabrication
- fusion
- grinding
- mould making
- patination
- polishing and finishing
- pressing and forming
- stone setting
- a combination of techniques

2. Research includes:

- approaching individuals with relevant expertise
- attending lectures and talks
- conducting material and technical experiments and tests
- seeking out information in books, journals, newspapers, internet

3. Intellectual property, moral rights and copyright requirements include:

- extent to which the work may be used
- procedures for seeking permission to use the work of others

4. Refining the conceptual vision includes:

- adjustment to consideration of elements and principles of design
- adjustment to subject matter or theme
- adjustment to utilise the extended capabilities of the technique
- no change

7. Equipment and tools include:

- brushes
- embossing tools, sets
- measuring tools
- modelling tools, sets
- various kinds of drawing pens and pencils
- rapidograph
- blade ruling pen
- painting dish
- drawing rulers
- ink (brush, pen and wash)
- charcoal (natural and compressed)
- conte
- crayon
- gouache
- felt tip markers
- paper (a range of weights, textures and colours)
- collage
- paints

8. Materials include:

- fabricated objects (plastic and metal objects, fabrics)
- found objects
- gem stones
- metals
- natural objects, e.g. shells, wood, clay, seeds, feathers, twigs, vines, bones
- synthetic materials (plastics, acrylic)

9. Sources of supply include:

- commercial outlets
- found objects or materials
- manufacturing or factory waste
- nature

5. Design features include:

- materials
- dimensions
- context
- purpose

6. Methods include:

- addition
- subtraction
- distortion
- enlargement
- reduction and radiation to present different 3-D patterns
- visual effects
- variations in size
- spatial relationships
- transfiguration

10. Rendering techniques include:

- pictorial representation of aspects and perspectives using colours
- highlighting and shading to provide depth and photo-like drawings
- drawing techniques
- 3-D rendering techniques
- use of multi-media
- collage
- assemblage
- photography
- montage

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. what is the role of research and experimentation in the developing and refining concepts for jewellery
2. what are the physical properties and capabilities of the range of materials and tools used in jewellery work
3. what are the characteristics of different materials under different treatments and the potential of these characteristics to achieve different effects
4. what are the formal elements and principles of design and how these may be used, adapted and challenged in the development of concepts for jewellery
5. what are the historical and theoretical contexts for jewellery and how this may be used to inform own artistic practice
6. what are the copyright, moral rights and intellectual property issues and legislation associated with jewellery work
7. what are the sources of raw, part-processed and processed materials and other resources for jewellery work
8. what are the work space requirements for jewellery design, including selection and set up of work space for particular types of work
9. what are the environmental issues associated with the tools and materials used in jewellery work, including the potential issues associated with new approaches
10. what are the organisational and legislative occupational health and safety procedures in relation to jewellery work
11. what are the types and characteristics of media and drawing surfaces
12. what are the drawing equipment and applications, storage and maintenance
13. what are the elements of design, including role of shape, plane and volume in rendering design
14. what are the procedures for estimation and measurement
15. what are rendering techniques such as 2-D and 3-D rendering
16. what are the variation, impact and effect of techniques such as enlargement, reduction, axis, repetition, radiation and rhythm on point, line and plane
17. what are the different types of forms/objects of drawing
18. what are the basic colour theories to bring out the characteristics and visual effects of

jewellery design
19. how to research and source information to inform experimentation in jewellery work
20. how to interpret information and material about the work of other jewellery artists
21. how to evaluate resource costs and to calculate material requirements
22. how to explore, select and manipulate a range of media, materials and drawings
23. how to explore marks and mark making
24. how to draw from observation
25. how to apply a range of rendering techniques, such as drawing, collage, photography and assemblage
26. how to draw to create spatial illusion
27. how to use shape, plane and volume in drawing and rendering
28. how to create texture in drawing (real and implied)
29. how to apply black and white and colour rendering techniques
30. how to express self through rendering techniques
31. how to produce detailed drawings by hand and/or by computer

EVIDENCE GUIDE

(1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

a. conduct research on new materials, tools, equipment or technology and ensure legal requirements are met in adopting ideas
b. develop a design concept for jewellery based on a knowledge and understanding of different jewellery making techniques
c. evaluate cost or other constraints which may impact on the development of work
d. use various design techniques to create jewellery patterns
e. use tools, materials and techniques to communicate the design features
f. make use of tactile and visual qualities in design rendering
g. produce drawings of jewellery or object designs using rendering techniques
h. produce basic black and white and colour diagrams using the effects of multi-media colouring materials and tools
i. produce black, white and coloured drawings by hand

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, portfolio, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

MA00512 Identify Precious Metal Jewellery through Basic Testing

Unit Descriptor: This unit deals with the skills and knowledge required to identify types of precious metals used in precious metal jewellery production.

ELEMENTS		PERFORMANCE CRITERIA	
	Candidates must be able to:		
1	Select tools and equipment for testing jewellery material	1.1	Identify and select tools and equipment to test jewellery material according to supervisor's instructions
		1.2	Prepare material, tools and equipment for testing jewellery material, following supervisor's instructions
2	Identify precious metal jewellery	2.1	Follow Occupational Safety and Health (OSH) guidelines in experimenting to determine jewellery material
		2.2	Determine precious metal jewellery through testing, according to manufacturers' instructions
		2.3	Record findings of experiment according to workplace procedures
3	Restore work area	3.1	Store filings and discard waste material according to workplace procedures
		3.2	Store materials, tools and equipment in accordance with workplace procedures

RANGE STATEMENT

All range statements must be assessed:

1. Precious metals include:

- gold
- silver

2. Tools and equipment include:

- file
- slate/stone
- testing needles
- magnet
- testing solution

3. Record findings of experiment includes:

- type of precious metal
- karat of gold
- ferrous/non-ferrous

4. Supervisor's instructions include:

- verbal
- written

5. Testing includes:

- magnet test
- acid test

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. what is the basic terminology used in the jewellery production industry
2. what are the properties of precious metals, base metals and alloys used in jewellery production
3. what are the characteristics of precious metals, base metals and alloys used in jewellery production
4. how to perform testing safely according to Occupational Safety and Health (OSH) guidelines
5. how to identify common ferrous and non-ferrous alloys
6. how to record findings according to workplace procedures
7. how to carry out housekeeping in the workshop
8. where to store tools, equipment, materials and filings after use

EVIDENCE GUIDE

(1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

- **a.** follow Occupational Safety and Health (OSH) procedures in determining precious metal jewellery
- **b.** determine precious metals used in jewellery production through testing
- **c.** record findings of experiment according to workplace procedures
- **d.** perform housekeeping measures in workshop according to workplace procedures

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

MA00513 Produce Precious Metal Jewellery

Unit Descriptor:

This unit describes the skills and knowledge required to produce precious metal jewellery through the exploration and application of a range of techniques, tools, equipment and materials.

ELEMENTS		PERFORMANCE CRITERIA	
	Candidates must be able to:		
1	Plan work for jewellery production	1.1	Identify work processes and resource requirements according to job requirements
		1.2	Organise and maintain work space following workplace procedures
		1.3	Select techniques for producing jewellery based on the design and ergonomic principles for type of jewellery
		1.4	Select tools, equipment and materials required for the production of jewellery based on selected techniques
		1.5	Prepare tools, equipment and materials for jewellery production in accordance with relevant workplace procedures and safety requirements
		1.6	Organise the resources required for the production of the proposed jewellery based on the plan of work
2	Produce jewellery	2.1	Calculate quantities of materials required and minimise waste where possible according to job requirements
		2.2	Follow Occupational Safety and Health procedures in the production of jewellery
		2.3	Use and adapt techniques, tools, equipment and materials appropriately to realise the conceptual vision of jewellery design
		2.4	Use potential different approaches, if necessary, that may enhance the final work and incorporate these into the work process
3	Restore work area	3.1	Clean and store tools, equipment and materials in accordance with relevant workplace and safety requirements
		3.2	Clean and restore work area in accordance with workplace policy

RANGE STATEMENT

All range statements must be assessed:

1. Tools and equipment include:

- pliers
- hammers
- dapping blocks and punches
- mandrels
- dividers
- shears
- side cutter
- tweezers
- engravers (power and hand tools)
- jewellery bench
- modelling tools
- embossing tools
- brushes
- piercing saw and blades
- tongs
- scissors
- mallets (wood, plastic, rubber)
- centre punch
- files
- drills
- clamps
- measuring tools
- power tools
- soldering/welding equipment and pickling solution
- clasps, links and jump-rings
- flex shaft and handpiece
- vice
- burrs
- various manual tools
- saw
- bench pin
- work bench
- protective clothing

2. Materials include:

- precious metals
- base metals

3. Safety requirements include:

- legislation
- regulations
- enterprise policy

4. Work space requirements includes:

- work bench/ work area
- light
- ventilation
- process specific requirements

5. Conceptual vision includes:

- the subject matter or theme for the jewellery
- the relationship of the work to a theoretical and historical context
- elements and principles of design

6. Techniques include:

- surface decorating
- drilling and assembling
- pressing and forming
- moulding
- extruding
- soldering/welding
- sintering

7. Jewellery includes:

- neck and head pieces
- pendants
- earrings
- rings
- brooches
- anklets
- bracelets
- other wearable pieces

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. what are the organisational and legislative occupational safety and health procedures in relation to jewellery work
2. what are the commonly used metals and materials used in jewellery production
3. what are the characteristics of common jewellery production materials
4. what are the properties of common jewellery production materials
5. what are the work space requirements for jewellery work
6. what are the ways of exploring, adapting and combining techniques and materials to achieve different effects in jewellery work
7. what is the importance of ergonomics in jewellery production
8. what are the formal elements and principles of design
9. what are the historical and theoretical contexts for jewellery
10. what are the copyright, moral rights and intellectual property issues that may occur
11. what are the jewellery standards/quality controls used in the industry
12. what are the environmental issues associated with the tools and materials used in jewellery work
13. how to apply the elements and principles of design to jewellery production
14. how to incorporate the principles of ergonomics in jewellery design
15. how to clean and maintain tools, equipment and work area

EVIDENCE GUIDE

(1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

a. use tools, materials and equipment safely and effectively according to workplace procedures and safety requirements
b. select the most appropriate techniques and resources for different jewellery designs ensuring the least amount of wastage of resources
c. produce jewellery using precious metals to industry standards

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

MA00515 Finish Precious Metal Jewellery

Unit Descriptor:

This unit deals with the knowledge and skills needed for finishing precious metal jewellery using a range of media and equipment. The unit covers selecting appropriate finishing procedures, identifying job materials, assessing hazards and finishing the job.

ELEMENTS		PERFORMANCE	
	Candidates must be able to:		
1	Prepare for finishing jewellery	1.1	Select finishing method according to the work requirements
		1.2	Select appropriate finishing tools, equipment and media according to work requirements
		1.3	Identify possible hazards that may occur with the use of finishing equipment, media and jewellery piece when finishing work piece and implement corrective action, if necessary
2	Finish precious metal jewellery	2.1	Wear appropriate Personal Protective Equipment (P.P.E) and follow workplace procedures for safety and health when finishing work piece
		2.2	Identify and correct any surface imperfections on work piece according to standard operating procedures
		2.3	Finish job surface to specification according to standard operating procedures
3	Restore work area	3.1	Clean and store tools and equipment in accordance with workplace procedures
		3.2	Clean and restore work area in accordance with workplace procedures

RANGE STATEMENT

All range statements must be assessed:

1. Finishing methods include:

- filing
- sanding
- sandblasting
- texturing
- polishing
- cleaning
- plating

2. Hazards include:

- airborne dust and chemical inhalation
- unsecured components
- chemical and friction burns
- heat

3. Finishing includes:

- sheen
- matte
- satin
- texture
- roughness
- contrast

4. Finishing tools, equipment and media includes:

- buffing compounds
- buffs and brushes
- laps
- polish cloths
- sanding media
- file
- burnisher/tumbler
- ultrasonic
- steamer

5. Common surface imperfections include:

- pitted surface
- porousity
- fire scale
- oxidation
- cracks

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. what are the safe work practices and procedures in relation to finishing jewellery
2. what are the personal protective clothing and equipment to be worn
3. what are the characteristics of precious metals
4. what are the typical surface finish specifications
5. what are the different finishing methods/techniques that can be used
6. what are the reasons for selecting a specific method/technique
7. what are the appropriate polishing media to be used in finishing for different types of materials
8. what are the effects of different types and grades of polishing media on the surface finish
9. what are the common surface imperfections/defects
10. what are the surface imperfections/defects that can be removed/repaired by finishing procedures
11. what are the methods and techniques to check for conformance to specifications
12. what are the hazards associated with the finishing process
13. how to read and follow information on standard operating procedures
14. how to check and clarify task-related information
15. how to select the finishing method to suit work requirements
16. how to fit and adjust finishing machines
17. how to produce surface finishes to specification
18. how to identify surface imperfections
19. how to assess processing hazards

EVIDENCE GUIDE

(1) Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

a. select appropriate finishing technique for workpiece
b. select appropriate tools, equipment and media
c. follow safety and health requirements when finishing work piece
d. perform all tasks in accordance with standard operating procedures
e. finish work piece to industry standard

(2) Method of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

GLOSSARY OF TERMS

Occupational Standards

Occupational Standards of competence are industry-determined specifications of performance, which describe the knowledge, skills and attitudes required by a worker in the performance of a particular role in the workplace. They specify what a person should know and do in order to carry out the functions of a particular job in the work environment. They are the building blocks for all activities in a competency-based training and certification system. An Occupational Standard is made up of a qualification plan, a unit title, elements, performance criteria, range statements, underpinning knowledge and skills and evidence guide.

Qualification Plan – The Qualification Plan identifies the Mandatory units which are those units that are necessary to deem a candidate competent in the occupational area and provide flexibility in different wok environments. It also contains the Title and Level of the qualification to be awarded.

Unit Title - The unit title is a succinct statement of the outcome of the unit of competency. It reflects the major activities or functions of an individual's work as well as the discreet units of work.

Unit Descriptor - The unit descriptor communicates the content of the unit of competency and the skill area it addresses.

Elements - These are the basic building blocks of the unit of competency. They describe the tasks in which competence should be demonstrated in order to carry out the specific function.

Performance Criteria - These are the descriptions of the outcomes of performance required for successful achievement of an element. They specify the required performance in relevant tasks, roles, skills and applied knowledge that enables competent performance.

Range Statement - This describes the essential operating conditions that should be present in training and assessment, depending on the work situation, needs of the candidate, accessibility of the item and local industry contexts. It lists the parameters in which candidates much demonstrate their competence.

Underpinning Knowledge and Skills – The knowledge identifies what a person needs to know to perform the work in an informed and effective manner. The skills describe the application of knowledge to situations where understanding is converted into a workplace outcome.

Evidence Guide - The Evidence Guide is critical in assessment as it provides information to Training Providers and Assessors about how the described competency should be demonstrated. It provides a range of evidence for the Assessor to make a determination of competence and defines the assessment context. The Evidence Guide describes:

- Conditions under which competency must be assessed including variables such as the assessment environment or necessary equipment
- Suitable methodologies for conducting assessment including the potential for workplace simulation

- Resource implications, for example access to particular equipment, infrastructure or situations
- How consistency in performance must be assessed over time, various contexts and with a range of evidence

Level 1 – Directly supervised worker

Recognizes competence in a range of varied work activities performed in a variety of contexts. Most work activities are simple and routine. Collaboration with others through work groups or teams may often be a requirement. Substantial supervision is required especially during the early months evolving into more autonomy with time.

Level 2 – Supervised skilled worker

Recognizes competence in a broad range of diverse work activities performed in a variety of contexts. Some of these may be complex and non-routine and involve some responsibility and autonomy. Collaboration with others through work groups or teams and guidance of others may be required.

Level 3 – Independent/autonomous skilled worker

Recognizes competence in a broad range of complex, technical or professional work activities performed in a wide variety of contexts, with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and the allocation of resources are often a requirement. The individual is capable of self-directed application, exhibits problem solving, planning, designing and supervisory capabilities.

Level 4 – Supervisory specialist worker

Recognizes competence involving the application of a range of fundamental principles and complex techniques across a wide and unpredictable variety of contexts. Requires very substantial personal autonomy and often significant responsibility for the work of others, the allocation of resources, as well as personal accountability for analysis, diagnosis, design, planning, execution and evaluation.

Level 5 – Managerial professional worker

Recognizes the ability to exercise personal professional responsibility for the design, development or improvement of a product, process, system or service. Recognizes technical and management competencies at the highest level and includes those who have occupied positions of the highest responsibility and made outstanding contribution to the promotion and practice of their occupation.