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**THE REPUBLIC OF KENYA**

**NATIONAL OCCUPATIONAL STANDARD**

**GYPSUM INSTALLER**

**LEVEL 3**

**PROGRAMME CODE: 0732 254 A**

# FOREWORD

The provision of quality education and training is fundamental to the Government’s overall strategy for social economic development. Quality education and training will contribute to achievement Kenya’s development blue print and sustainable development goals.

Reforms in the education sector are necessary for the achievement of Kenya Vision 2030 and meeting the provisions of the Constitution of Kenya 2010. The education sector had to be aligned to the Constitution and this resulted to the formulation of the Policy Framework for Reforming Education and Training (Sessional Paper No. 4 of 2016). A key feature of this policy is the radical change in the design and delivery of the TVET training. The policy document requires that training in TVET shall be competency based, curriculum development shall be industry led, certification shall be based on demonstration of competence and mode of delivery shall allow for multiple entry and exit in TVET programs.

These reforms demand that Industry takes a leading role in curriculum development to ensure the curriculum addresses its competence needs. It is against this background that this Occupational Standard has been developed for the purpose of informing development of a competency-based painter and decorator 3 Curriculum. This Occupational Standard will also form the basis for assessment of an individual for competency certification.

It is my conviction that this Occupational Standard will play a great role towards development of a competent human resource for the Construction Sector’s growth and sustainable development.

# PREFACE

Kenya Vision 2030 aims to transform the country into a newly industrializing, “middle income country providing a high-quality life to all its citizens by the year 2030”. Kenya intends to create a globally competitive and adaptive human resource base to meet the requirements of a rapidly industrializing economy through life-long education and training. TVET has a responsibility of facilitating the process of inculcating knowledge, skills and attitudes necessary for catapulting the nation to a globally competitive country, hence the paradigm shift to embrace Competency-Based Education and Training (CBET).

The Technical and Vocational Education and Training Act No. 29 of 2013 and the Sessional Paper No. 4 of 2016 on Reforming Education and Training in Kenya, emphasized the need to reform curriculum development, assessment and certification. This called for a shift to CBET to address the mismatch between skills acquired through training and skills needed by industry as well as increase the global competitiveness of Kenyan labour force.

The industry in conjunction with national polytechnics and other national agencies have developed this Gypsum Installation Level 3 Occupational Standard. The Standard is designed and organized with clear performance criteria for each element of a unit of competency. It also outlines the required knowledge and skills for the performance of prescribed tasks as well as evidence guide for assessment purposes.

# ACRONYMS AND ABBREVIATIONS

CPU - Central Processing Unit

PPE Personal Protective Equipment

TVET Technical and Vocational Education and Training

ISCED International Standard Classification of Education

**KEY TO UNIT CODE**



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# OVERVIEW

Gypsum Installation Level 3 qualification constist of competencies that an individual must posses to install gypsum . It entails Installing Gypsum Ceiling, Gypsum Partitions and Gypsum Cabinets.

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| --- | --- |
| **CORE UNITS OF COMPETENCY** | |
| 0732 251 01A | INSTALL GYPSUM CEILING |
| 0732 251 02A | INSTALL GYPSUM PARTITIONS |
| 0732 251 03A | INSTALL GYPSUM CABINETS |

# INSTALL GYPSUM CEILING

**UNIT CODE:** 0732 251 01A

**UNIT DESCRIPTION**

This unit describes the competences required to install gypsum ceiling. It involves Marking gypsum ceiling line position, installing gypsum ceiling furring, gypsum ceiling boards and applying finishes to gypsum ceiling boards.

**ELEMENTS AND PERFORMANCE CRITERIA**

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| **ELEMENT**  These describe the key outcomes which make up workplace functions | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements  ***(Bold and italicized terms are elaborated in the range)*** |
| 1. Mark gypsum ceiling line position | * 1. PPEs are donned as per the job requirements.   2. ***Tools and equipment*** are selected as per the job requirements.   3. Ceiling height is determined as per the design specifications.   4. Reference points are marked as per the job requirements.   5. Ceiling level is aligned as per the job requirements.   6. Chalk line is snapped along the ceiling line as per the job requirements. |
| 1. Install gypsum ceiling furring | * 1. PPEs are donned as per the job requirements.   2. Tools and equipment are selected as per the job requirement.   3. Perimeter ***channels*** are installed as per the job requirements.   4. Hanger wires are fastened to joists as per the job requirements.   5. Main furring channels are attached to the hanger wires as per the job requirements.   6. ***Ceiling*** ***furring*** channels are installed perpendicular to the main channels as per the job requirements.   7. Furring framework is levelled as per the job requirements.   8. Housekeeping practices are performed after installing the ceiling furring as per workplace procedures. |
| 1. Install gypsum ceiling boards | * 1. PPEs are donned as per the job requirements.   2. Tools and equipment are selected as per the job requirements.   3. Ceiling dimensions are measured to determine board sizes per the design specification.   4. ***Ceiling boards*** are cut to size as per the design specifications.   5. Ceiling boards are positioned against the furring framework per the job requirements.   6. Ceiling boards are fastened to the furring framework per the job requirements.   7. Housekeeping practices are performed after installing the ceiling boards as per the workplace procedures. |
| 1. Apply finishes to gypsum ceiling boards | * 1. PPEs are donned as per the job requirements.   2. Tools and equipment are selected as per the job requirements.   3. Ceiling board joint surfaces are prepared as per the job requirements.   4. First coat of ***joint compound*** is applied along the joints as per the job requirements.   5. ***Joint tape*** is applied along the joints as per the job requirements.   6. Second coat of joint compound is applied along the joints as per the job requirements.   7. Third coat of joint compound is applied along the joints as per the job requirements.   8. ***Skimming compound*** is applied to the board surface as per the job requirements.   9. Board surface is smoothened using sandpaper as per the job requirements.   10. Primer paint is applied to the surface as per the job requirements.   11. Housekeeping practices are performed after applying finishes to ceiling boards as per the workplace procedures. |

**RANGE**

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

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| **Variable** | **Range**  *May include but is not limited to:* |
| 1. ***Tools and equipment*** may include but not limited to: | * 1. Tape Measure   2. Chalk Line   3. Pencil/Marker   4. T-Square/Drywall Square   5. Utility Knife   6. Drywall Saw   7. Roto Zip/Drywall Router   8. Drywall Screw Gun/Drill   9. Drywall Hammer   10. Corner Trowel   11. Hawk & Trowel |
| 1. ***Ceiling furring*** may include but not limited to | * 1. Metal track systems   2. Metal Furring systems   3. Aluminium   4. Galvanized steel   5. Timber track systems   6. Wooden Furring systems   7. Timber battens   8. Perimeter channels   9. Hanger wires   10. Main furring channels   11. Cross furring channels   12. Furring framework levelling |
| 1. ***Channels*** may include but not limited to***:*** | * 1. Ceiling channels   2. Partition channels   3. Furring channels   4. Corner channels   5. Control joint channels   6. Acoustic channels   7. Fire-rated channels |
| 1. ***ceiling boards*** may include but not limited to: | * 1. Regular gypsum boards   2. Moisture-resistant gypsum boards   3. Fire-resistant gypsum boards   4. Lightweight gypsum boards   5. Foil-backed gypsum boards   6. Impact-resistant gypsum boards |
| 1. ***joint compound*** may include but not limited to: | * 1. All-purpose joint compound   2. Taping joint compound   3. Topping joint compound   4. Lightweight joint compound   5. Quick-setting joint compound (hot mud)   6. Fire-resistant joint compound   7. Moisture-resistant joint compound |
| 1. ***Joint tape*** may include but not limited to: | * 1. Paper joint tape   2. Fiberglass mesh tape   3. Metal-reinforced tape   4. Vinyl or plastic tape |
| 1. ***Skimming compound*** may include but not limited to: | * 1. . Ready-mix joint compound   2. Setting-type joint compound   3. Plaster-based skim coat   4. Acrylic or polymer-based skim coat   5. Lightweight skim coat compound |

**REQUIRED KNOWLEDGE**

1. Site Safety
2. Machine knowledge, tools including their uses and maintenance
3. Interpretation of working drawings.
4. Installation of gypsum
5. Current trends in gypsum technology
6. Basic arithmetics

**SKILLS**

1. Communication skills
2. Negotiations skills
3. Problem solving skills
4. Time management
5. Interpersonal skills
6. Life skills

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills range.

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| 1. Critical aspects of competency | ***Assessment requires evidence that the candidate***   1. Donned personal protective equipment as per work requirements. 2. Selected tools and equipment appropriate for the task. 3. Determined ceiling height as per design specifications. 4. Marked reference points accurately as per job requirements. 5. Aligned ceiling level to ensure uniformity. 6. Snapped chalk line along the ceiling line for accurate alignment. 7. Installed perimeter channels securely as per work specifications. 8. Fastened hanger wires to joists to provide structural support. 9. Attached main furring channels to hanger wires for framework stability. 10. Installed cross furring channels perpendicular to main channels as per job requirements. 11. Levelled furring framework to maintain a straight and even ceiling surface. 12. Performed housekeeping practices after ceiling furring installation as per workplace procedures. 13. Measured ceiling dimensions accurately to determine board sizes. |
| 1. Resource implications | The following resources should be provided:   1. Appropriately simulated environment where assessment can take place. 2. Access to relevant assessment environment. 3. Resources relevant to the proposed assessment activity or tasks. |
| 1. Methods of assessment | Competency in this unit may be assessed through:   * 1. Practical assignment   2. Written   3. Oral interview   4. Demonstrations |
| 1. Context of assessment | 4.1 Competency may be assessed in workplace or in a simulated workplace setting |
| 1. Guidance information for assessment | 5.1 Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# INSTALL GYPSUM PARTITIONS

**UNIT CODE :** 0732 251 02A

**UNIT DESCRIPTION**

This unit describes the competences required to perform gypsum partition. It involves Constructing gypsum partition framing, installing gypsum partition boards and Applying finishes to gypsum partition boards surfaces.

**ELEMENTS AND PERFORMANCE CRITERIA**

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| **ELEMENT**  These describe the key outcomes which make up workplace functions | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements  ***(Bold and italicized terms are elaborated in the range)*** |
| 1. Construct gypsum partition framing | * 1. PPEs are donned as per the job requirements.   2. ***Setting out Tools*** and equipment are selected as per the job requirements.   3. Partition layout is set out as per the design specifications.   4. Bottom plate/track is fixed to the floor as per the job requirements.   5. Top plate/track is aligned to the bottom plate/track as per the job requirements.   6. Top plate/track is fixed to the ceiling as per the job requirements.   7. Vertical studs are fixed to the top and bottom plates/tracks as per the job requirements.   8. Horizontal bracings are fixed in between studs as per the job requirements.   9. Partition framing is checked for plumbness as per the job requirements.   10. Housekeeping practices are performed after constructing the partition frame as per the workplace procedures. |
| 1. Install gypsum partition boards | * 1. PPEs are donned as per the job requirements.   2. Tools and equipment are selected as per the job requirements.   3. Partition dimensions are measured to determine board sizes per the design specification.   4. Partition boards are cut to size as per the design specifications.   5. Partition boards are positioned against the partition framework per the job requirements.   6. Partition boards are fastened to the partition framework per the job requirements.   7. Housekeeping practices are performed after installing the ceiling boards as per the workplace procedures. |
| 1. Apply finishes to gypsum partition boards surfaces | * 1. PPEs are donned as per the job requirements.   2. Tools and equipment are selected as per the job requirements.   3. partition board joint surfaces are prepared as per the job requirements.   4. First coat of joint compound is applied along the joints as per the job requirements.   5. Joint tape is applied along the joints as per the job requirements.   6. Second coat of joint compound is applied along the joints as per the job requirements.   7. Third coat of joint compound is applied along the joints as per the job requirements.   8. ***Skimming compound*** is applied to the board surface as per the job requirements.   9. Board surface is smoothened using ***sandpaper*** as per the job requirements.   10. Primer paint is applied to the surface as per the job requirements.   11. Housekeeping practices are performed after applying finishes to ceiling boards as per the workplace procedures. |

**RANGE**

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

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| **Variable** | **Range**  *May include but is not limited to:* |
| 1. ***Setting out tools*** May include but is not limited to: | * 1. Laser level   2. Dumpy level   3. Chalk line   4. Builders line   5. Tape measure   6. Building square |
| 1. ***Skimming compound*** May include but is not limited to: | * 1. Ready-mix joint compound   2. Setting-type joint compound   3. Plaster-based skim coat   4. Acrylic or polymer-based skim coat   5. Lightweight skim coat compound |
| 1. ***Sandpaper*** May include but is not limited to: | * 1. Fine-grit sandpaper (180–240 grit)   2. Medium-grit sandpaper (100–150 grit)   3. Coarse-grit sandpaper (60–80 grit)   4. Sanding sponges   5. Sanding sponges |

**REQUIRED KNOWLEDGE**

1. Site Safety
2. Machine knowledge, tools including their uses and maintenance
3. Interpretation of working drawings.
4. Installation of gypsum
5. Current trends in gypsum technology
6. Basic arithmetics

**SKILLS**

1. Communication skills
2. Computer literacy
3. Negotiations skills
4. Problem solving skills
5. Time management
6. Interpersonal skills
7. Life skills

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills range.

|  |  |
| --- | --- |
| 1. Critical aspects of competency | ***Assessment requires evidence that the candidate***   * 1. Donned personal protective equipment as per work requirements.   2. Selected tools and equipment as per job specifications.   3. Set out partition layout according to design specifications.   4. Fixed bottom plate/track securely to the floor as per work requirements.   5. Aligned top plate/track with the bottom plate/track to ensure accuracy.   6. Fixed top plate/track to the ceiling as per job specifications.   7. Installed vertical studs securely to top and bottom plates/tracks.   8. Fixed horizontal bracings between studs to enhance stability.   9. Checked partition framing for plumbness to maintain structural integrity.   10. Performed housekeeping practices after partition frame construction as per workplace procedures.   11. Measured partition dimensions accurately to determine board sizes.   12. Cut and positioned partition boards to fit the framework as per job requirements.   13. Applied joint compound, tape, and skimming compound to achieve a smooth finish. |
| 1. Resource implications | The following resources should be provided:   1. Appropriately simulated environment where assessment can take place. 2. Access to relevant assessment environment. 3. Resources relevant to the proposed assessment activity or tasks. |
| 1. Methods of assessment | Competency in this unit may be assessed through:   * 1. Practical assignment   2. Written   3. Oral interview   4. Demonstrations |
| 1. Context of assessment | Competency may be assessed in workplace or in a simulated workplace setting |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# INSTALL GYPSUM CABINETS

**UNIT CODE:** 0732 251 03A

**UNIT DESCRIPTION**

This unit describes the competences required to install gypsum cabinets. It involves Constructing gypsum cabinet framing, installing gypsum cabinet boards, Applying finishes to gypsum cabinet surfaces

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace functions | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements  ***(Bold and italicized terms are elaborated in the range)*** |
| 1. Construct gypsum cabinet framing | * 1. PPEs are donned as per the job requirements.   2. Tools and equipment are selected as per the job requirements.   3. Cabinet ***framing material*** is selected as per the job requirements.   4. Partition layout is set out as per the design specifications.   5. Bottom plate/track is fixed to the surface as per the job requirements.   6. Top plate/track is aligned to the bottom plate/track as per the job requirements.   7. Top plate/track is fixed to the surface as per the job requirements.   8. Vertical studs are fixed to the top and bottom plates/tracks as per the job requirements.   9. Horizontal bracings are fixed in between studs as per the job requirements.   10. Cabinet framing is checked for plumbness as per the job requirements.   11. Housekeeping practices are performed after constructing the partition frame as per the workplace procedures. |
| 1. Install gypsum cabinet boards | * 1. PPEs are donned as per the job requirements.   2. ***Tools and equipment*** are selected as per the job requirements.   3. Cabinet dimensions are measured to determine board sizes per the design specification.   4. Cabinet boards are cut to size as per the design specifications.   5. Cabinet boards are positioned against the cabinet framework per the job requirements.   6. Cabinet boards are fastened to the partition framework per the job requirements.   7. Housekeeping practices are performed after installing the ceiling boards as per the workplace procedures. |
| 1. Apply finishes to gypsum cabinet surfaces | * 1. PPEs are donned as per the job requirements.   2. Tools and equipment are selected as per the job requirements.   3. Cabinet joint surfaces are prepared as per the job requirements.   4. First coat of joint compound is applied along the joints as per the job requirements.   5. ***Joint tape*** is applied along the joints as per the job requirements.   6. Second coat of ***joint compound*** is applied along the joints as per the job requirements.   7. Third coat of joint compound is applied along the joints as per the job requirements.   8. Angle and edge strips are fixed to board edges as per the job requirements.   9. ***Skimming compound*** is applied to the board surface as per the job requirements.   10. Board surface is smoothened using ***sandpaper*** as per the job requirements.   11. Primer paint is applied to the surface as per the job requirements.   12. Housekeeping practices are performed after applying finishes to ceiling boards as per the workplace procedures. |

**RANGE**

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range**  *May include but is not limited to:* |
| 1. ***Tools and equipment*** may include but not limited to: | * 1. Tape Measure   2. Chalk Line   3. Pencil/Marker   4. T-Square/Drywall Square   5. Utility Knife   6. Drywall Saw   7. Roto Zip/Drywall Router   8. Drywall Screw Gun/Drill   9. Drywall Hammer   10. Corner Trowel   11. Hawk & Trowel |
| 1. ***Framing material*** may include but not limited to | * 1. **Solid wood Solid wood**   2. Plywood   3. Medium-density fibreboard (MDF)   4. Hardwood lumber   5. Melamine-coated board   6. Aluminium or metal framing   7. **Laminate-covered composite materials** |
| 1. ***Joint compound*** may include but not limited to: | * 1. All-purpose joint compound   2. Taping joint compound   3. Topping joint compound   4. Lightweight joint compound   5. Quick-setting joint compound (hot mud)   6. Fire-resistant joint compound   7. Moisture-resistant joint compound |
| 1. ***Joint tape*** may include but not limited to: | * 1. Paper joint tape   2. Fiberglass mesh tape   3. Metal-reinforced tape   4. Vinyl or plastic tape |
| 1. ***Skimming compound*** may include but not limited to: | * 1. Ready-mix joint compound   2. Setting-type joint compound   3. Plaster-based skim coat   4. Acrylic or polymer-based skim coat   5. Lightweight skim coat compound |

**REQUIRED KNOWLEDGE**

1. Site Safety
2. Machine knowledge, tools including their uses and maintenance
3. Interpretation of working drawings.
4. Installation of gypsum
5. Current trends in gypsum technology
6. Basic arithmetics

**SKILLS**

1. Communication skills
2. Computer literacy
3. Negotiations skills
4. Problem solving skills
5. Time management
6. Interpersonal skills
7. Life skills

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills range.

|  |  |
| --- | --- |
| 1. Critical aspects of competency | ***Assessment requires evidence that the candidate***   * 1. Donned personal protective equipment as per work requirements.   2. Selected tools, equipment, and cabinet framing materials as per job specifications.   3. Set out partition and cabinet layout according to design specifications.   4. Fixed bottom plate/track securely to the surface as per job requirements.   5. Aligned and fixed top plate/track accurately to maintain structural integrity.   6. Installed vertical studs securely to the top and bottom plates/tracks.   7. Fixed horizontal bracings between studs to enhance stability.   8. Checked cabinet framing for plumbness to ensure proper alignment.   9. Measured and cut cabinet boards precisely as per design specifications.   10. Positioned and fastened cabinet boards securely to the framework   11. Prepared cabinet joint surfaces and applied joint compound and tape.   12. Applied skimming compound and smoothed board surfaces using sandpaper.   13. Performed housekeeping practices after cabinet installation and finishing. |
| 1. Resource implications | The following resources should be provided:   1. Appropriately simulated environment where assessment can take place. 2. Access to relevant assessment environment. 3. Resources relevant to the proposed assessment activity or tasks. |
| 1. Methods of assessment | Competency in this unit may be assessed through:   * 1. Practical assignment   2. Written   3. Oral interview   4. Demonstrations |
| 1. Context of assessment | Competency may be assessed in workplace or in a simulated workplace setting |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |