

**Federal Democratic Republic of Ethiopia**

**Occupational Standard**

**RURAL CADASTER AND LAND REGISTRATION SERVICE SUPPORT OPERATION**

**NTQF Level II**



bd07067_



*Ministry of Education November 2017*

*Ministry of Education December, 2016*

**Introduction**

Ethiopia has embarked on a process of reforming its TVET-System. Within the policies and strategies of the Ethiopian Government, technology transformation – by using international standards and international best practices as the basis, and, adopting, adapting and verifying them in the Ethiopian context – is a pivotal element. TVET is given an important role with regard to technology transfer. The new paradigm in the outcome-based TVET system is the orientation at the current and anticipated future demand of the economy and the labor market.

The Ethiopian Occupational Standards (EOS) are - a core element of the Ethiopian National TVET-Strategy and an important factor within the context of the National TVET-Qualification Framework (NTQF).They are national Ethiopian standards, which define the occupational requirements and expected outcome related to a specific occupation without taking TVET delivery into account.

This document details the mandatory format, sequencing, wording and layout for the Ethiopian Occupational Standard comprised of Units of Competence.

A Unit Title describes a distinct work activity. It is documented in a standard format that comprises:

* Occupational title, NTQF level
* Unit code
* Unit title
* Unit descriptor
* Elements and Performance criteria
* Variables and Range
* Evidence guide

Together all the parts of a Unit Title guide the assessor in determining whether the candidate is competent.

The ensuing sections of this EOS document comprise a description of the respective occupation with all the key components of a Unit Title

* Chart with an overview of all Units of Competence for the respective level including the Unit Codes and the Unit Titles
* Contents of each Unit Title (competence standard)
* Occupational map providing the Technical and Vocational Education and Training (TVET) providers with information and important requirements to consider when designing training programs for this standards and for the individual, a career path

**UNIT OF COMPETENCE CHART**

|  |
| --- |
| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation** |
| **Occupational Code: AGR CLR** |
| ***NTQF Level II***  [AGR CLR2 03 1117](#AGRCLR2031116)  Carry out Linear and Angular Measurements and Calculations  [AGR CLR2 02 1117](#AGRCLR2021116)  Implement Land Tenure Security from Women and Vulnerable Groups Perspective  [AGR CLR2 01 1117](#AGRCLR2011116)  Implement Property Rights, National and Regional Land Laws and Regulations  [AGR CLR2 09 1117](#AGRCLR2091116)  Identify Land and Property Boundaries  [AGR CLR2 12 1117](#AGRCLR2121116)  Assist in Adjudication, Registration and Certification Activities for Legal Cadastre  [AGR CLR2 14 1117](#AGRCLR2141116)  Participate in Workplace Communication  [AGR CLR2 15 1117](#AGRCLR2151116)  Work in Team Environment  [AGR CLR2 13 1117](#AGRCLR2131116)  Operate within Community Culture and Values  [AGR CLR2 04 1117](#AGRCLR2041116)  Conduct Basic Land Survey  [AGR CLR2 05 1117](#AGRCLR2051116)  Collect and Organize Spatial and Non-spatial Data  [AGR CLR4 17 1117](#AGRCLR2171116)  Standardize and Sustain 3S  [AGR CLR2 06 1117](#AGRCLR2061116)  Operate Personal Computer and Computing Packages  [AGR CLR2 08 1117](#AGRCLR2081116)  Read and Interpret Maps  [AGR CLR2 10 1117](#AGRCLR2101116)  Produce Basic Maps  [AGR CLR2 11 1117](#AGRCLR2111116)  Maintain Information Recording System  [AGR CLR2 07 1117](#AGRCLR2071116)  Perform Basic Aerial Photography and Image Interpretation  [AGR CLR4 16 1117](#AGRCLR2161116)  Develop Business Practice |

**NTQF Level II**

|  |  |
| --- | --- |
| **Occupational standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Implement Property Rights, National and Regional Land Laws and Regulations** |
| **Unit Code** | **[AGR CLR2 01 1117](#AGR_CLR2_01_1116)** |
| **Unit Descriptor** | This Unit Title covers the knowledge, skills, attitudes and professional code ethics required to aware the community about individual and communal property rights, regional land laws and regulations that facilitate land transaction, formulation and implementation of local bylaws and implement conflict resolution institutions. |

|  |  |
| --- | --- |
| **Element** | **Performance criteria** |
| 1. Identify and aware the community about property right, regional land laws and regulations | * 1. ***Types and sources of information*** are reviewed and appropriate ***tools and equipment*** are identified.   2. The rural context of property and property ***rights*** are identified and described in accordance with ***appropriate guidelines***.   1.3. Community awareness is created on ***property right***, and national and regional land laws and regulations  1.3. ***Types of land holding and use rights*** are identified and described.  1.4. Characteristics and legal status of ***communal land*** tenure systems are identified and reflected in accordance with regional land laws and regulations.  1.5. Land rights related gender and vulnerable group are mainstreamed in accordance with regional land laws and regulations.  1.6. Principles of ***good land governance*** are identified and promoted. |
| 2. Implement customary and statutory laws, legislation and property rights | 2.1. The existing land laws, legislation and property rights are implemented  2.2.Characteristics and legal status of pastoral and communal land tenure system are identified and implemented  2.3.The existing customary land tenure system are compromised with statutory land tenure system  2.4.Challenges of communal land tenure security from pastoral and Agro-pastoral areas perspective are identified and documented  2.5. Impacts of ***land tenure security*** on Livelihood and the Environment are identified and prompted |
| 3. Facilitate land transaction | 3.1. Types of transaction activities are identified  3.2. ***Changes in*** ***land holding rights***, property formations, ***changes in land parcel formations*** and holding are identified and documented  3.3. Appropriate updating and recording system is applied. |
| 4. Facilitate formulation and implementation of local bylaws | 4.1.***Local by-laws*** are formulated and implemented by communities in accordance with ***socio-cultural*** ***settings*** of society and following ***Occupational Health and Safety (OHS)***  4.2. Customary Pastoral and communal Land Governance are identified and considered in accordance with the current situation and existing ***rules and regulations***  4.3. Women and vulnerable groups are considered in accordance with the current situation and existing rules and regulations  4.4. Bylaws are revised and documented in accordance with the current situation of the community  4.5. Bylaws are compromised with the existing rules and regulations |
| 5. Implement conflict resolution mechanisms through established institutions | 5.1.Source of conflicts are identified through discussion with community.  5.2.Conflict resolution committees are elected from the society or strengthen the existing customary institution based on their acceptance by the local community.  5.3.Conflicts are resolved based on various resolution mechanisms following OHS. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Types and Sources of Information | May include, but not limited to:   * Organizational rules, regulation and guidelines * Internet, related books and related materials * Technical manuals * Sharing best practice * Virtual library * Workplace guidelines * Recorded documents/logo/history |
| Tools and equipment | May include, but not limited to:   * Legislation and Policy documents * Land use policy guidelines * National and regional land administration proclamation and regulations * National and regional environmental regulations |

|  |  |
| --- | --- |
| Rights | May include, but not limited to:   * Access: Right to enter a defined physical area and enjoy non-subtractive benefits * Withdrawal: Right to obtain resource units or ‘products’ of a resource system * Management: Right to regulate internal use patterns and transform the resource by making improvements * Exclusion: Right to determine who will have access rights and withdrawal rights, and how those rights may be transferred * Alienation: Right to sell or lease management and exclusion rights |
| Appropriate guidelines | May include, but not limited to:   * Legislation and Policy documents * Land use policy guidelines * National and regional land administration proclamation and regulations * National and regional environmental regulations |
| Property right | May include, but not limited to:   * The right of individuals and companies to own and use property. |
| Types of Land holding and use rights | May include, but not limited to:   * State Ownership of Land * Land Grants * Collective and Communal holding and use right * Private holding and use right of Land |
| Communal land | May include, but not limited to:   * Is a (mostly rural) territory in possession of a community, rather than an individual, state or company * Occupied or used by members of a community subject to the rules or custom of the community |
| Good land governance | May include, but not limited to:   * Equity of access, * Affordability-efficiency and effectiveness, * Participatory * Transparency and accountability, * Consistency * Legitimacy and Security |
| Land Tenure security | May include, but not limited to:   * Grant of Holding and use right * Transfer of land rights |
| Changes in land holding rights | May include, but not limited to:   * Occur in case of Gift, * Inheritance, * Divorce |
| Changes in land parcel formations | May include, but not limited to:   * Division, * Consolidation, * Parcel and sub division |
| By-laws | May include, but not limited to:   * An ordinance, passed under the authority of a [charter](http://en.wikipedia.org/wiki/Charter) or * Provincial/state law specifying what things may be regulated |
| Socio-cultural settings | May include, but not limited to:   * The way people act and develop based around their surroundings and the roles of different ethnic groups, * Religious groups, * Gender and the culture; with all these elements combined it forms a personality |
| OHS | May include, but not limited to:   * Use updated and new version articles while referring to policy issues * Implement policies and strategies in accordance with the local context * Respect social culture, norms and customs |
| Rules and regulations | May include, but not limited to:   * Set forth the operational powers or provisions and the use right, * Restrictions and responsibilities adopted by the association. Or Specific articles describing and/or prohibiting behaviour, * Actions or conduct |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of competence | A candidate must be able to demonstrate the ability to::   * Apply land laws and national and regional regulations, land holding and use rights * Aware community * Formulate local bylaws * Resolve conflicts * Consider gender |
| Underpinning Knowledge | Demonstrates knowledge of:   * Socio-cultural |
| Underpinning Skills | Demonstrate skills to:   * Formulate local bylaws * Resolve conflicts |
| Resource Implication | The following resources MUST be provided:   * Access is required to real or appropriately simulated situations, including work areas, materials and equipment, * Documentation and information on workplace practices and OHS practices. * Specifications and work instructions * Approved assessment tools * Certified assessor /assessor’s panel |

|  |  |
| --- | --- |
| Method of Assessment | Competence may be assessed through:   * Practical assessment by direct observation of tasks through simulation/Role-plays * Written exam/test on underpinning knowledge * Questioning or interview on underpinning knowledge * Project-related conditions (real or simulated) and require evidence of process * Case studies * Portfolio Assessment (e.g. Certificate from training providers or employers) |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Implement Land Tenure Security from Women and Vulnerable Groups Perspective** |
| **Unit Code** | **[AGR CLR2 02 1117](#AGR_CLR2_02_1116)** |
| **Unit Descriptor** | This unit specifies the competence required to identify and promote the importance of land tenure rights from gender and vulnerable group’s perspectives. It requires the ability to identify access to and control over land, identify Women’s land tenure security and improve women’s access to land, Implement land tenure security, consider gender in formulation and implementation of local bylaws. It also requires building skills on ways to advocate for gender equity in accessing land through dissemination of information to different groups of the right holders and the duty bearers. |

|  |  |
| --- | --- |
| **Element** | **Performance Criteria** |
| 1. Identify access to and control over of land | * 1. ***Access*** rights of ***different*** ***groups/categories of women*** and ***vulnerable groups*** to land are identified   2. ***Common means of acquiring land*** are identified and inspected in regard to women and vulnerable groups perspective   3. Determining factors to control over and decision-making with regard to land and ***obstacles to accessing rights and protection*** are identified   4. Impacts of security of land tenure to agricultural productivity are identified   5. Impacts of rural land cadastre, registration and certification on women land tenure security are clearly identified   6. ***Constraints of implementation*** of land registration and certification in Ethiopia are identified   7. Women’s and vulnerable groups’ perspectives of ***property right*** in Ethiopia are identified   8. Practice of land registration and certification in terms of women and vulnerable groups perspective are identified |
| 1. Identify features of Women’s land tenure security | * 1. Historical overview of women’s land tenure security in Ethiopia is identified   2. Relation of gender to land tenure systems is identified and reasons of gender are identified as an issue in access to and control over land   3. ***Potential benefits of women’s land tenure security*** are identified   4. ***Challenges*** and/or ***obstacles*** that undermine women’s land accessing rights and protections are identified   5. ***Opportunities*** are identified for enhancing women’s land tenure security   6. Potential roles of women in a tenure system are identified and established   7. ***Women’s position*** in the customary system is identified   8. ***Women’s ability*** is identified to access statutory protection   9. Community awareness is raised and gender issues are ***mainstreamed***   10. Gender implications of land registration and certification process are identified |
| 1. Implement land tenure security | * 1. ***Tools and equipment*** are identified and selected as directed by ***appropriate personnel***   2. Land tenure and women’s and vulnerable groups property right in Ethiopia are identified   3. Legal and customary systems related to securing land tenure rights of women and vulnerable groups are identified   4. Land tenure security is implemented from women and vulnerable groups perspective   5. Capacity development and ***empowerment programs and strategies*** for Women and vulnerable groups are identified and implemented in accordance with land tenure legal and policy frameworks   6. ***Advocating*** activities and sensitization of legal actors and customary leaders are supported to enforcing better laws   7. Gender equitable dispute resolution process are assisted to enforce the laws   8. Principles of ***good land governance*** in relation to gender are identified and promoted |
| 1. Consider gender in formulation and implementation of local bylaws | * 1. ***Gender*** is considered while formulating, revising and implementing ***Local by-laws*** by communities in accordance with ***socio-cultural*** setting of society and current situation of the community   2. Women’s and vulnerable groups are properly addressed in local Bylaws   3. Women are supported and empowered to be drivers of change |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Access | May include, but not limited to:   * The right to be on the land, such as the right to walk across the land |
| Different groups/categories of women | May include, but not limited to:   * Access rights of widows * Access rights of daughters * Access rights of women involved in a consensual relationship * Access rights of women with physical disabilities |
| Vulnerable groups | May include, but not limited to:   * Orphans * Aged people/Elderlies * Children * Women * Survivors of violence * People with physical or mental disabilities * Ethnic minorities |
| Common means of acquiring land | May include, but not limited to:   * Inheritance from father * Sharecropping agreements * Inheritance from mother * Allocation by spouse * Allocation by lineage * Licensed for specific term * Obtained from grandfather * Gift from father * Allocation by stool * Gift from mother * Obtained from grandmother * Purchase * Obtained from a friend * Father in law |
| Obstacles to accessing rights and protection | May include, but not limited to:   * Male-Dominated Culture and Society * Lack of Economic Decision-Making Power and Autonomy * Sexual Assault and Violence Against Women * Armed Conflict and Displacement * Access to Statutory Protection and Justice |
| Constraints of implementation | May include, but not limited to:   * Technical issues and constraints: * Institutional issues and constraints * Legal issues and constraints: * Economic issues and constraints: |
| Property right | is right of individuals and companies to own and use property. |
| Potential benefits of Women’s land tenure security | May include, but not limited to:   * Guarantee ownership and security tenure * Reduce land disputes * Provide security for credit * Facilitate the management and protection of state lands * Facilitate rural land reform * Develop and monitor land markets * Protect land resources and support environmental management. |
| Challenges | May include, but not limited to:   * Discrepancies between statutory and customary laws * Partiality in law enforcement * Socio cultural and socio-economic factors * Inadequate information and awareness |
| Obstacles | May include, but not limited to:   * Male-Dominated Culture and Society * Lack of Economic Decision-Making Power and Autonomy * Sexual Assault and Violence Against Women * Armed Conflict and Displacement * Access to Statutory Protection and Justice |
| Opportunities | May include, but not limited to:   * Political will and legal recognition of women’s property rights * Promotion of innovative and responsible land administration |
| Women’s position | May include improvement of:   * Redefining Cultural Norms * Mediation: Helping women negotiate for better conditions in customary systems. * Linking Women and Customary Leaders: Combining efforts of women and customary leaders to protect and promote women’s land rights * Facilitating return and access to land for displaced women * Providing direct assistance to obtain customary tenure protection |
| Women’s ability | May include improvement of:   * Continue awareness raising activities with more focused goals and targeting methods. * Provision of direct legal assistance to bridge the gap between passage of law and implementation. * Promote cooperation between formal and informal dispute resolution and other legal mechanisms. |
| Mainstreaming | May include, but not limited to:   * Listening to Women and Recognizing Gender Biases * Promote Meaningful Participation by Women * Gender Analyses of Activities |
| Tools and equipment | May include, but not limited to:   * Legislation and Policy documents * Land use policy guidelines * National and regional land administration proclamation and regulations * National land tenure legal and policy frameworks and institutions * National and regional family laws |
| Appropriate personnel | May include, but not limited to:   * Assessors * Colleagues * Managers * Supervisor * Trainers |
| Empowerment | May include, but not limited to:   * Strength in numbers: support women’s committees and associations * Economic empowerment * Political empowerment * Redefining cultural norms * Mediation: helping women negotiate for better conditions in customary systems. * Linking women and customary leaders: * Combining efforts of women and customary leaders to protect and promote women’s land rights * Facilitating return and access to land for displaced women * Providing direct assistance to obtain customary tenure protection |
| Programs and strategies | May include, but not limited to:   * Federal government community programs, business Programs, and state government community programs related to the environment. |
| Advocating | May include, but not limited to:   * Protecting a broader spectrum of land rights * Protecting all unions, and explicitly stating presumptions of joint ownership of marital property * Specifically prohibiting discrimination against women in application of customary law |
| Good land governance | May include, but not limited to:   * Equity of access * Affordability-efficiency and effectiveness, * Participatory * Transparency and accountability * Consistency * legitimacy * Security |
| Gender | May include, but not limited to:   * Traditional position of women vs. the effects of the land registration * Position of polygamous wives, widows and divorcees in land registration * Women’s participation in the adjudication and demarcation process * Women’s and men’s perceptions of women’s benefits of land registration |
| Local by-law | May include, but not limited to most commonly refers to an ordinance, passed under the authority of a charter or provincial/state law specifying what things may be regulated. |
| Socio-culture | May include, but not limited to:   * The way people act and develop based around their surroundings and the roles of different ethnic groups,   gender and the culture with all these elements combined it forms a personality. |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of competence | Must demonstrate knowledge and skills competence to:   * Identify, interpret and apply customary and legal land tenure system * Inspect history of land acquisition * Align with community values and aware community * Analyze and interpreted land tenure pertaining to women’s and vulnerable groups property right * Establish role of women’s and vulnerable groups in community and land tenure system * Describe consultation processes * Describe different groups/categories of women and vulnerable groups * Describe common means of acquiring land * Describe obstacles to accessing rights and protection * Work in teams * Describe reasons of gender as an issue in access to and control over land * Develop capacity and implement empowerment programs and strategies * Sensitize legal actors and customary leaders * Promote good land governance * Resolve gender related conflicts |
| Underpinning Knowledge | Demonstrates knowledge of:   * Federal and regional proclamation, regulations and policies * Customary land tenure system and land tenure legislation * Tenure types and related legal matters * Local knowledge of socio-cultural conditions * History of women’s land tenure security * Common means of acquiring land * Determining factors to control over and decision-making on land * Obstacles to land accessing rights and protection * Land tenure security and agricultural productivity * Women’s and vulnerable groups’ perspectives of property right * Relation of gender to land tenure systems * Challenges and/or obstacles * Opportunities * Potential roles of community * Gender mainstreaming * Women and vulnerable groups’ empowerment * Tools and equipment * Dealing with gender related conflicts |
| Underpinning Skills | Demonstrate skills to:   * Apply and advocate better customary and legal land tenure system * Resolve gender related conflicts * Identify socio-cultural values * Communicate in a range of social-cultural environments with diverse people * Explore land tenure history. * Establish role of Women and vulnerable groups’ in land tenure system * Work in teams * Safe work practices * Obtain ongoing instructions |
| Resource Implication | The following resources MUST be provided:   * Access is required to real or appropriately simulated situations, including work areas, materials and equipment, * Documentation and information on workplace practices and OHS practices. * specifications and work instructions * Approved assessment tools * Certified assessor /Assessor’s panel |
| Method of Assessment | Competence may be assessed through:   * Practical assessment by direct observation of tasks through simulation/Role-plays * Written exam/test on underpinning knowledge * Questioning or interview on underpinning knowledge * Project-related conditions (real or simulated) and require evidence of process * case studies * Portfolio Assessment (e.g. Certificate from training providers or employers) |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Carry out Linear and Angular Measurements and Calculations** |
| **Unit Code** | **[AGR CLR2 03 1117](#AGR_CLR2_03_1116)** |
| **Unit Descriptor** | This unit specifies the competence required to carry out measurements and perform simple calculations to determine task and material requirements for a job in a surveying work environment. It includes the minimum criteria for competence assessment. |

|  |  |
| --- | --- |
| **Element** | **Performance Criteria** |
| 1. Plan and prepare | 1.1.Work instructions and ***information sources*** are identified and confirmed  1.2 ***Compliance documentation*** relevant to the work activity is accessed, interpreted and applied  1.3. ***Quality requirements*** of the company operations are recognized and adhered to  1.4 Measuring and calculating ***tools and*** ***equipment*** areselected to carry out tasks consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported |
| 2. Measure distance with linear and angular measuring instruments | 2.1. Types of linear ad angular ***measurement*** instrument s are identified  2.2. Basic linear measurement methods are applied as directed  2.3. Basic angular measurement is assisted  2.4. Method of obtaining measurement is selected and applied  2.5. Horizontal distances(distances between points on the ground) are measured using tapes, measuring wheel, pacing in accordance with ***horizontal distance measurement procedures*** and ***safe operating procedures***  2.6. Tapping over level ground is measured and checked in accordance with horizontal distance measurement procedures and safe operating procedures.  2.7. Tapping along sloping ground is identified and checked and measurements are recorded in accordance with horizontal distance measurement procedures and safe operating procedures  2.8. ***Distance correction in tapping operation*** is defined accordingly.  2.9. Common mistakes made in tapping operationare rectified.  2.10. Tapping precisions are clearly considered  2.11. Horizontal, vertical or zenith angles are measured and reported in accordance with safe operating procedures |
| 3. Perform calculations | 3.1.Appropriate calculation method is selected for achieving the required result  3.2. ***Materials*** quantities for the project are correctly calculated using the appropriate factors |
| 4. Estimate approximate quantities and units | 4.1.***Calculations*** are taken for determining material requirements  4.2.Appropriate formulas are selected for calculating quantities  4.3. Estimate quantities are taken from the calculations  4.4.Material quantities for the project within enterprise tolerances are calculated, confirmed and recorded |
| 5.Assist in setting up, configuration and use of surveying instrument | 5.1 Types of surveying instruments are identified and setting up, configuration and use of surveying instruments are assisted  5.2. Measurements are read and recorded. |
| 6.Measure distances with leveling instrument | 6.1 Stadia geometry for inclined line is calculated.  6.2 ***Stadia adjustment*** is carried out in accordance with the user’s manual of the specific instrument.  6.3 Parts of sub tense bar are listed.  6.4 The distance measured with sub tense bar is checked |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Information sources | May include, but not limited to:   * Verbal or written and graphical instructions, * Signage, * Work schedules/plans/specifications, * Charts and hand drawings, * Memos, * Maps and diagrams or sketches |
| Compliance  documentation | May include, but not limited to:   * Legislative, * Organizational and site requirements and procedures * Manufacturer's guidelines and specifications * Ethiopian standards * code of practice * Employment and workplace relations legislation |
| Quality requirements | May include, but not limited to:   * Dimensions, * Tolerances, * Standards of work and material standards as detailed in the project drawings, * Specifications and project documentation to meet client satisfaction |
| Tools and equipment | May include, but not limited to:   * Leveling instrument, profile board, String and line level, Protractor, * Hand held GPS, GNSS ranging pole * Staff, * Staff bubble , * Sub tense bar , rulers, tape, measuring wheels, calculators and may include laser equipment |
| Measurement | May include the determination of:   * Length * Area * Height * Width * Depth * Volume * Scales * Perimeters * Quantities, |
| Horizontal distance measurement  procedures | May include, but not limited to:   * Tapping over level ground, * Tapping along sloping ground, * Distance correction in tapping operation, * Common mistakes made in tapping, * Tapping precision |
| Safe operating  procedures | May include, but not limited to:   * Recognizing and preventing hazards associated with underground and overhead services, other machines, personnel, restricted access barriers, traffic control, working in proximity to others, * Worksite visitors and the public |
| Distance correction  in tapping operation | May include, but not limited to:   * Correction for standard length, * Correction for sloop, * Correction for sag, * correction for temperature |
| Materials | May include, but not limited to:   * Dimensions * Tolerances, * Standards of work and material standards as detailed in the project drawings, * Specifications and project documentation to meet client satisfaction |
| Calculations | May include, but not limited to:   * Addition, subtraction, multiplication and division * Length, perimeter, circumference, area, volume, number, ratio, percentage conversions, such as of meters to millimeters and millimeters to meters |
| Stadia adjustment | May include, but not limited to:   * Adjust plate vital * Check standards alignment * Tracking a point (Squares of crosshair) * Double center * Vertical indexing |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of competence | Must demonstrate skills and knowledge in:   * Knowledge of the requirements, procedures and instructions for carrying out measurements and calculations * Implementation of requirements, procedures and techniques for the safe, effective and efficient carrying out measurements and calculations * Working with others to undertake and complete measurements and calculations that meet all of the required outcomes * Consistent timely completion of measurements and calculations that safely, effectively and efficiently meets the required outcomes * Location, interpretation and application of relevant information * Compliance with site safety plan, OHS regulations and legislation applicable to workplace operations * Compliance with organizational policies and procedures including quality requirements * Completion of measurements, calculations and determination of quantities for at least three different projects of varying complexity * Calculate each of the following using a realistic rural Cadastre task or example: length, perimeter, circumference, area, volume, number, ratio, percentage * Conversion of meters to millimeters and millimeters to meters * Safe and effective operational use of tools and equipment * Communication and working effectively and safely with others |
| Underpinning Knowledge | Must demonstrate knowledge of:   * Calculations * Company procedures * communication devices * Processes for care of measuring equipment * Surveying terminology * Site and equipment safety requirements * Communicating effectively * computing angular and linear measurements |
| Underpinning Skills | Demonstrate skills to:   * Plan and prepare * Measure distance with linear measuring instruments. * Set up and use leveling instrument * Measure distances with leveling instruments |
| Resource Implication | The following resources MUST be provided:   * Access is required to real or appropriately simulated situations, including work areas, materials and equipment, * Documentation and information on workplace practices and OHS practices. * specifications and work instructions * Approved assessment tools * Certified assessor /Assessor’s panel |
| Method of Assessment | Competence may be assessed through:   * Practical assessment by direct observation of tasks through simulation/Role-plays * Written exam/test on underpinning knowledge * questioning or interview on underpinning knowledge * project-related conditions (real or simulated) and require evidence of process * case studies * Portfolio Assessment (e.g. Certificate from training providers or employers) |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| --- | --- |
| **Unit Title** | **Conduct Basic Land Surveys** |
| **Unit Code** | **[AGR CLR2 04 1117](#AGR_CLR2_04_1116)** |
| **Unit Descriptor** | This unit covers the knowledge, skills, attitude of professional code ethics required to conduct basic land/boundary surveys, make accurate computation and neat sketching, basic proper field procedures. |

|  |  |
| --- | --- |
| **Element** | **Performance Criteria** |
| 1. Identify and describe basic principle of surveying | * 1. Basic principles of surveying are identified.   2. Primary division of surveying is identified.   3. ***Classification of surveying*** is identified.   4. Basic principles and application of coordinate systems and map projections are identified. |
| 1. Prepare for the conduct of land surveys | 1. ***Equipment*** check lists, field books, and maps of the area to be surveyed are prepared. 2. Equipment is checked as to operational according to manufacturer’s specifications and organizational guidelines. 3. Scope of work is checked and clarified following the ***standards and procedures*** and types of land survey to be conducted. 4. Notices are delivered to the parcel holder and adjacent holder to appear on the ground on dates specified. 5. Participants for the survey activity are mobilized following the given schedule. |
| 1. Perform land surveying | * 1. Distance, angle and traverse measurements are made under supervision***.***   2. ***Land survey activities*** are conducted according to the job specifications following existing rules and regulations on land surveys.   3. Total Station and GPS/GNSS operations and measurements are made under supervision,.   4. Field notes are accomplished and submitted to ***appropriate personnel***.   5. ***OHS requirements*** and quality assurance are adhered to throughout the conduct of the survey work. |
| 1. Prepare survey results | 1. ***Data*** gathered from survey sites conducted are checked for correctness, completeness, errors and mistakes are eliminated and proper field reports/ documents are prepared. 2. Survey returns/results are prepared and submitted to appropriate personnel for evaluation. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Classification of surveying | May be done:   * Based on nature of field in:   + Land/boundary/property survey   + Marine survey   + Astronomical survey * Based on object of survey in:   + Geological survey   + Mine survey   + Military survey * Based on methods employed in:   + Triangulation   + Traversing * Based on instrument used as:   + Total station survey   + Chain survey   + Theodolite survey   + Compass survey   + Photographic ( Aerial and satellite) |
| Equipment | May include, but not limited to:   * Level instrument, Total Station/ EDM * Hand held GPS * GNSS * Prism/Target * Tripod * Surveyors Compass * Measuring Tape * Staff * Ranging pole * Taping arrow * Ground plate * Pocket calculator * Barometer |
| Standards and  procedures | May include, but not limited to:   * Field Operations Manual * Policies and guidelines * Rules and regulations for cadastral surveys * Department Administrative Orders * Memorandum Circular * Instrument manuals * Field book * Team Charter * Equipment Check List |
| Land survey activities | May include, but not limited to:   * Establishing legal boundaries for properties * Locate and relocate boundary/property corners * Measuring shape, location, and dimensions /Area of land or land features * Calculating relative positions, heights, property lines and other characteristics of terrain * Conducting ground surveys to establish baselines, elevations and other measurements * Establishing fixed points for use in making maps, etc. |
| Appropriate personnel | May include, but not limited to:   * GIS/LIS expert * IT expert |
| OHS requirements | May include, but not limited to:   * Ethiopian standards * Development of site safety plan * Identification of potential hazards * Inspection of work sites * Training staff in OHS requirements * Use of personal protective clothing * Use of safety equipment and signage |
| Data | May include, but not limited to:   * Traverse data * Computations and adjustments/Observed /Measured, Computed and Adjusted Data * Parcel data * Distance, Angle/Bearing, Coordinate , Area and Height data |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of Competence | Assessment requires evidence that the candidate:   * Evaluated data gathered necessary for survey works in accordance with applicable standards and procedures, and existing rules and regulations on land surveys * Prepared for the conduct of land surveys following the standards and procedures * Performed land and property surveying according to the job specifications and existing rules and regulations on land surveys * Performed proper packaging, transportation, handling of equipment and accessories and kept clean * Performed accurate, computations, neat sketch, drafting, and field note keeping * Applied safety practices and quality assurance in the workplace * Communicated effectively with team members |

|  |  |
| --- | --- |
| Underpinning Knowledge and Attitudes | Demonstrate knowledge of:   * Basic surveying * Standards and procedures * Understand survey process and methods * Regulatory requirements in conducting land surveys including lot sketching and monumenting * Data collection and gathering * Survey measurements * Specifications and uses of surveying equipment * Values and attitudes * Patience and tactful in dealing with clients * Neat and accurate note keeping and drafting * Professional code of ethics |
| Underpinning Skills | Demonstrate skills of:   * Establishing project control * Operating and setting up of equipment * Reading and recording field data including measurements * Using compass, tape, level, EDM, GPS, GNSS etc * Accomplishing survey works * Analyzing data and information (e.g. Survey returns, accurate calculations and measurements) * Coordination skills and communication skills * Calculation skills * Working in team * Geometry and trigonometry * Error and mistake elimination/isolation capability * Finding and locating marks for property in question * Understanding law of land and property * Minoring instrument adjustment |
| Resources Implication | Access is required to take place real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices. |
| Methods of Assessment | Competence may be assessed through:   * Interview/Written Test * Observation/Demonstration and Oral Questioning |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Collect and Organize Spatial and Non-Spatial Data** |
| **Unit Code** | **[AGR CLR2 05 1117](#AGR_CLR2_05_1116)** |
| **Unit Descriptor** | This unit covers the knowledge, attitudes and skills required to prepare to collect basic spatial data, use equipment under supervision, assist in gathering basic spatial data, maintain equipment under supervision, assist in finalizing the data collection process, assist in the storage of spatial data, assist in accessing and retrieving spatial data. It requires the ability to prepare for interview, conduct interview, review and correlate information through interview. It also requires the ability to use basic data collection methodologies. Data collections are conducted in rural and peri-urban area. |

|  |  |
| --- | --- |
| **Elements** | **Performance Criteria** |
| 1. Describe spatial and socio-economic data | * 1. Spatial data is identified and described.   2. Non-spatial/Socio-economic datais identified and described. |
| 1. Prepare to collect basic data. | 1. ***Requirements*** of the task are clarified with ***appropriate persons.*** 2. ***Equipment, resources and data collection Spatial Information Service (SIS) technologies*** are selected according to task requirements. 3. Equipment is checked to ensure that it is in safe working order. 4. Appropriate equipment and data collection technologies are operated according to the task requirements and manufacturer specifications 5. Skills and knowledge are updated to accommodate changes in work environment. |
| 1. Assist in gathering basic data. | * 1. Spatialdata and ***attributes*** are collected and organized using methodologies detailed in the provided ***data collection plan***.   2. ***OHS requirements*** associated with assisting basic data gathering tasks and the workplace environment are adhered to   3. Any discrepancies between specifications, standards and actual activities are identified, recorded and reported.   4. ***Metadata*** is documented according to accepted industry standards.   5. Operational, administrative and legal requirements for data collection are complied with and recorded.   6. OHS requirements are planned for and adhered to. |
| 1. Assist in finalizing the data collection process. | * 1. Tools, resources and equipment, and SIS technologies are stored safely in appropriate locations and according to***manufacturer specifications****.*   2. All data and documentation are stored according to organizational guidelines. |
| 1. Assist in the storage of data. | * 1. Data is recorded in index/order according to ***organizational guidelines.***   2. Data index/order is used to maintain data storage according to organizational, legal and spatial data requirements.   3. ***Administrative and legal requirements*** for data storage are complied with and recorded.   4. Spatial data is backed up according to organizational guidelines.   5. Designated ***methods of spatial data storage*** and ***distribution*** are observed, following consultation with relevant personnel.   6. Skills and knowledge are updated to accommodate the vocational needs of Cadastre and land registration service sector. |
| 1. Assist in accessing and retrieving data. | * 1. Indexing system is used to locate data source.   2. Data is presented to ***relevant personnel*** for translation into required format. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Requirements | May include, but not limited to:   * In the field in rural and peri-urban area. * Private home * Cadastral index map at pertinent scale of 1:1500 to 1:500. * Personnel present: * Senior staff * Colleagues * Interpreter * Support persons * Method of recording: * Hand written * Typewritten/word processed * File notes * Equipment: * Electronic equipment * Recording equipment * Computer equipment * Availability of interviewee |
| Appropriate persons | May include, but not limited to:   * Assessors * Colleagues * Managers * Supervisors * Trainers |
| Equipment,  resources and data collection /Spatial information service (SIS)/ technologies | May include, but not limited to:   * Data recording equipment * Digital imagery * Handheld global positioning system (gps) * Maps (digital or hard copy) * Measuring instruments * Non-navigational aids relevant to duties, including: * Compass * Clinometer * Distance measuring wheel * Personal digital assistant * Personal computer-based digitizing boards * Tools * Ultra High Frequency (UHF) radio |
| Attributes | May include, but not limited to:   * Condition * Date * Feature code * Size * type |
| Data collection plan | May include, but not limited to:   * Interview strategies appropriate to the situation and purpose of the interview, such as: * Direct questioning * Empathetic questioning * Investigative interviewing * Exclusion of leading questions * Avoidance of cross-examination * Safety requirements for interviewer, interviewee and others present * Purpose * Structure * Context * Expectations * Intended/desired outcomes * Criteria for assessment * Risk management considerations * Key questions in sequential order, highlighting main points * Assessing sources of information * Arrangement of: * Data dogging * GPS * Scanning * Photogrammetry * Remote sensing * Sonar * Survey * Total station |
| OHS requirements | May include:   * Ethiopian standards * Development of site safety plan * Identification of potential hazards * Inspection of work sites * Training staff in OHS requirements * Use of personal protective clothing * Use of safety equipment and signage |
| Metadata | May include summarized information about a spatial dataset that describes its characteristics, including:   * Availability * Conditions of use * Coordinate system * Currency * Date of acquisition * Quality * Source * Spatial data acquisition methodologies * Version control |
| Manufacturer  specifications | May include, but not limited to:   * Electronic format * Equipment specifications * Online assistance or digital support documentation * Operator manuals * Printed product instructions and information * Spatial database * Warranty documents |
| Organizational  guidelines | May include, but not limited to:   * Code of ethics * Company policies and procedures * Legislation relevant to the work or service function * Manuals * OHS policies and procedures * Personnel practices and guidelines outlining work roles and * Responsibilities * Electronic format * Equipment specifications * Operator manuals * Printed product instructions and information * Spatial database * Warranty documents |
| Administrative and legal requirements | May include, but not limited to:   * Ethiopian standards, quality assurance and certification requirements * Award and enterprise agreements * Company OHS guidelines * Licensing arrangements * Relevant codes of practice * Access protocols and obligations * Organizational protocols for accessing physical, financial and human resources * Royalty obligations * Relevant legislation affecting organizational operations, including: anti-discrimination and diversity, copyright and digital copyright industrial relations reimbursements * Indigenous considerations * Title search processes * Understanding of company OHS guidelines |
| Method of spatial data storage | May include, but not limited to:   * Digital * Hard copy |
| Distribution method | May include, but not limited to:   * Network access to an authoritative data source that can accommodate storage in digital or hard copy format |
| Relevant personnel | May include, but not limited to:   * Colleagues * Registered surveyors * Company personnel * Staff or employee representatives * Supervisors or line managers * Suppliers * Users |
| Materials | May include, but not limited to:   * Paper-based and electronic documents, including: * Maps * Photographs * Videotapes * Physical objects and materials * Audiotapes |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of Competence | Assessment must show that the candidate:   * Apply known solutions to a limited range of predictable problems * Apply basic data collection tools/methodologies * Use data collection equipment * Assess and record information from varied sources * Demonstrating basic operational knowledge in a moderate range of areas * Applying data security and backup measures * Retrieving spatial data * Storing spatial data according to established policies and procedures * Using an index system * Deal with a range of communication/information at one time * Present information clearly and effectively in oral and written form * Use appropriate sources of information * Identify properties lying on enumeration areas * Interpret basic terminologies of land management, development, utility and infrastructure * Ask appropriate questions * Provide appropriate information |
| Underpinning Knowledge and Attitudes | Demonstrates knowledge of:   * Basic data collection methods using electronic equipment * Basic characteristics, capabilities and limitations of tools, technology and equipment used * Basic organizational policies and guidelines, such as OHS guidelines * Equipment and spatial information services technologies, capabilities, limitations and potential problems * Current indexing systems (basic) * Classification systems, processes and products linked to specifications (basic) * Data retrieval methods, querying and browsing (basic) * Network and security guidelines (basic) * OHS requirements * Organizational policies and guidelines (basic) * Risk management principles as applied to spatial data storage (basic) * Spatial data formats (basic) * Spatial data structure requirements (basic) * Storage media (basic) * Application of map interpretation knowledge. * Application of legislation to interviewing including privacy, ethics, confidentiality and freedom of information * Organizational policies and guidelines relating to interviews questioning techniques * Legal and ethical considerations for conducting interviews * Cultural awareness in the context of interviewing * Procedures for using interpreters. * Knowledge of basic terminologies for land management, development, utility and infrastructure. * Legal and organizational requirements for documentation * Legal requirements relating to recording of information * Relating to interviews effective verbal communication methods and techniques |
| Underpinning Skills | Demonstrates knowledge of:   * Ability to relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities * Communicate in a clear and concise manner in both written and verbal modes * Computer skills to perform basic data collection * Literacy skills to: * Assess and use workplace information * interpret and understand basic legal, financial and procedural requirements * Process workplace documentation * Read and record data * Numeracy skills to: * Accurately record and collate * Undertake basic computations * Organizational skills to prioritize daily activities * Spatial skills to: * Apply appreciation of height, depth, breadth, dimension and position to basic virtual representation * Apply understanding of height, depth, breadth, dimension and position to actual operational activity (basic) * Collect spatial and a spatial data using electronic equipment and spatial information service technologies * Use a range of equipment in the field safely, accurately and as required for the task * Technological skills (basic) to use computers * Work effectively as part of a team * Use maps and visual symbols for identification of interview unit. * Provide Unique Property Identification Number (UPIN) for each interview format leaf. * Use interviewing techniques to suit a range of situations and interviewees * Engage in exchanges of sometimes complex oral information * Vary style and language structure to suit a range of interviewees * Use techniques to deal with difficult interview situations * Use a range of communication techniques that include establishing rapport, listening, probing, reflecting, negotiation, conflict resolution * responding to diversity, including gender and disability * Use critical analysis, evaluation and deductive reasoning * Use problem solving and decision making related to interviewing * Using judgment to test the veracity of information, and variety of questions and interviewing techniques * Prepare interview documentation requiring accuracy of expression and formality in structure and format * Operate technical and electronic equipment, where necessary * Apply public sector standards and legislation such as occupational health and safety and environment in the context of interviewing |
| Resources Implication | Assessment is required to take place in real or appropriate simulated situations, including work areas, materials and equipment, information on workplace and OHS practices. |
| Methods of Assessment | Competency may be assessed through:   * Interview/Written Test * Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Operate Personal Computer and Computing Packages** |
| **Unit Code** | **[AGR CLR2 06 0112](#AGR_CLR2_06_1116)** |
| **Unit Descriptor** | This unit describes the skills and knowledge required to operate a Personal Computer (PC) in a home or small office environment, including accessing files with application programs, sending and retrieving emails, using the internet, using peripheral devices and applying basic security procedures and power management settings. It also required in identifying, selecting and operating software packages, including MS-window, word-processing and a spreadsheet application package and MS-access for the purpose of Rural Cadastre and Land Registration Service. |

|  |  |
| --- | --- |
| **Elements** | **Performance Criteria** |
| 1. Prepare to use the personal computer | 1. Physical components and associated peripheral devices of the personal computer are identified to become familiar with the available network 2. Physical connectivity of devices are checked to ensure correct operation and performance 3. Appropriate procedures are booted up and followed to activate the computer 4. User ***equipment*** is maintained and freed from defects that could cause injury |
| 1. Manage computer configurations | * 1. Computer settings are altered to best suit the user   2. Power management settings is configured to minimize power consumption as an environmentally sustainable measure   3. Operating system and the application programs are identified loaded on the computer   4. Basic software installation and removal are conducted to improve computer capability   5. Desktop environment is navigated and manipulated to create and desktop icons customized and application programs accessed |
| 1. Access and use basic application programs | * 1. Folder with ***file*** documents containing basic office applications is opened   2. Files are selected and accessed***.***   3. Filesare amended and saved according to requirements.   4. Documents and filesthat meet organizational needs are produced and accessed.   5. Filesare saved in appropriate directories/folders.   6. ***Software*** is exited correctly without loss of ***data.***   7. Internet is accessed using the web browser to view and basic web information search is conducted   8. Simple email message is sent and retrieved to communicate with other parties   9. Firewall and antivirus and malware scans are used to reduce security risks and threats in the system   10. Help functions within each application are accessed and used   11. Important documents and programs are backed up to minimize risk of data loss   12. Any work to be retained are saved and opened application programs are closed   13. Computer is shut down and any unused peripheral devices are switched off |
| 1. Access and use basic peripheral devices | * 1. External storage devices are accessed to retrieve, copy, move and save information in different media and locations   2. ***Printer settings*** are used on an installed printer to print a document   3. Audio-Visual (AV) devices are access to view and play a multimedia file |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Equipment | May include, but is not limited to:   * Workstations * Personal computers * Modems and other connectivity devices * Printers * Hard drives * DSL modems * Monitors * Switches * Hubs * Personal Digital Assistant (PDA) * Other peripheral devices |
| File | May include, but is not limited to:   * Html pages * Pdf files * Text files * Pictures * Music * Email messages |
| Software | May include, but is not limited to:   * Commercial software applications * Organization-specific software * It is expected that a word processing application, Database Application and Spreadsheet application will be chosen in preference to other types of applications |
| Data | May include, but not limited to:   * Text * Images * Graphics * Screenshots * Icons added to the document |
| Printer settings | May include, but not limited to:   * Layout * Paper size * Number of copies * Orientation * Sides |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of Competence | A person must be able to demonstrate:   * Use hardware and software * Navigate around the desktop, using features to perform tasks * Save results of work. * Produce workplace documents using a minimum of three different software application packages * Open, amend and save files and documents according to organizational requirements * Apply Workplace Health and Safety (WHS) principles and responsibilities for ergonomics, such as work periods and breaks * Use help manuals and online help. |
| Underpinning Knowledge and Attitudes | Demonstrate knowledge of:   * Identify basic parts of a computer and various hardware components * Explain commonly used software operation and application packages * Name basic security functions and computer functions * List a range of peripheral devices that can be used with a personal computer * Describe common computer storage devices. * Identify application software packages used by the organization and list the purpose of each * Explain basic technical terminology related to reading help files and responding to system help prompts * Outline current business practices related to using software to prepare reports * List features and functions of commercial computing packages * Describe import and export software functions * Describe the process of linking documents * Outline WHS principles and responsibilities for ergonomics, such as work periods and breaks explain the purpose of input and output devices. * Basic understanding of system usage * Basic technical terminology in relation to reading help files and responding to system help prompts * Personal computer access and log-on procedures |
| Underpinning Skills | Demonstrate skills to:   * Layout, monitor and chair positioning, keyboard techniques and use of the mouse * Apply management and help * Read and write at a level where basic workplace documents are understood * Clear and precise communication with team members and supervisors * Interpret of user manuals * Recognize textual information to determine and complete technical functions * Enter information using familiar text types in a format appropriate to environment * Plan routine tasks with familiar goals and outcomes, taking some limited responsibility for decisions regarding sequencing * Develop understanding of the purpose and specific functions of common digital tools used in work contexts * Implement basic security requirements related to own tasks |
| Resources Implication | Assessment is required to take place in real or appropriate simulated situations, including work areas, materials and equipment, and information on workplace practices and OHS practices. |
| Methods of Assessment | Competency may be assessed through:   * Interview/Written Test * Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| --- | --- |
| **Unit Title** | **Perform Basic Aerial Photography and Image Interpretation** |
| **Unit Code** | **[AGR CLR2 07 1117](#AGR_CLR2_07_1116)** |
| **Unit Descriptor** | This Unit Titlecovers the knowledge, skills, and attitude required to interpret information from various types of image data. It requires the ability to identify, and interpret image data to fulfill project requirements. |

|  |  |
| --- | --- |
| **Element** | **Performance Criteria** |
| 1. Identify basic concepts of image data | 1. Basic concepts of ***image data*** are applied in the context of the ***project objective*** and ***project survey area***. 2. Possible sources of image data are identified. 3. Properties of different types of image data are identified. 4. ***Constraints*** of different types of image data are identified. 5. Spatial reference systems are identified as required. 6. Skills and knowledge are updated to accommodate changes in spatial reference systems. |
| 1. Identify and interpret featuresfrom image data | 1. Scale of digital and hard copy image data are determined. 2. Problems involving ***acquired*** ***image*** ***data*** are solved according to ***organizational*** ***policies*** ***and*** ***principles***. 3. ***Elements of image interpretation*** are identified. 4. Image futures with the actual ground are compromised 5. Information from acquired image data is used to fulfill project objectives |
| 1. Finalize and document activity | * 1. Required interpretationis completed according to organizational requirements   2. ***Required documentation*** is completed according to organizational policies. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Image Data | May include, but not limited to:   * Digital * Hard copy |
| Project Objective | May include, but not limited to:   * Acquiring intellectual property * Aims of project * Evaluation criteria * Milestones * Performance indicators * Project implementation * Quality standards * Return on investment * Risk management * Targets |
| Project survey area | May include, but not limited to:   * Aerial photographs * Other forms of digital data in the horizontal or vertical plane |
| Constraints | May include, but not limited to:   * Resource availability * Specific survey requirement * Time |
| Acquired image data | May include, but not limited to:   * Aerial photographs * Digital image data * Hard copy image data * Imagery * Other remote sensed images. |
| Organizational policies and principles | May include, but not limited to:   * Code of ethics * Legislation relevant to the work or service function, including Equal Employment Opportunity (EEO) * Manuals * OHS practices, policies and procedures * Personnel practices and guidelines outlining work roles and responsibilities * Quality assurance principles. |
| Elements of image interpretation | May include, but not limited to:   * Tone/hue * Texture * Size * Shape * Using location * Using pattern * Shadow |
| Required documentation | May include, but not limited to:   * Final product report * Project reports |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of Competence | A person who demonstrates competency in this unit must be able to provide evidence of:   * Accessing and interpreting information to identify the components of image data to be measured and monitored * Managing quality processes * Planning basic resources * Performing measurements * Writing reports and completing documentation |
| Underpinning Knowledge and Attitudes | Demonstrate knowledge of:   * Data formats (basic) * Image data (basic) * Information management * Organizational policies and guidelines * Quality assurance principles * Planning * Relevant industry requirements and standards * Safe work practices * Spatial reference systems * Surveying requirements for capturing various sources of data (basic) |
| Underpinning Skills | Demonstrate skill of:   * Prepare and administer documentation * Priorities activities to meet contractual requirements * Quality assurance skills * Spatial skills to:   + Interpret basic data imagery   + Perform spatial data archival and retrieval   + Perform spatial data management and manipulation   + Solve basic problems relating to height, depth, breadth, dimension, direction and position in actual operational activity and virtual representation   + Develop of understanding of implications of height, depth, breadth, dimension and position to actual operational activity and virtual representation * Time Management Skills |
| Resources Implication | Assessment is required to take place in real or appropriate simulated situations, including work areas, materials and equipment, and information on workplace practices and OHS practices. |
| Methods of Assessment | Competency may be assessed through:   * Interview/Written Test * Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| --- | --- |
| **Unit Title** | **Read and interpret maps** |
| **Unit Code** | **[AGR CLR2 08 1117](#AGR_CLR2_08_1116)** |
| **Unit Descriptor** | This unit covers the reading and interpreting of maps in the rural Cadastre service. It includes: identifying types of maps and their functions; recognizing amendments and commonly used symbols and abbreviations; locating and identifying key features on a map; and reading and interpreting job specifications. |

|  |  |
| --- | --- |
| **Element** | **Performance Criteria** |
| 1. Plan and prepare for reading, interpretation and navigation | * 1. Reading, interpretation and navigating maps and plans documentations are accessed   2. Reading, interpretation and navigation information, work requirements and travel details are obtained, clarified and confirmed   3. ***Different types of maps*** are identified   4. Reading, interpretation and navigation equipment and aids are identified   5. Faults/errors in maps and equipment are identified and recorded, issues are reported and addressed   6. Communication plan is established and maintained |
| 1. Conduct reading, interpretation and navigation | * 1. Rout to destination is assessed and selected, information are considered from map/plan/field observations d   2. Maps are examined, and legend on maps, standard symbols, abbreviations, information and navigation data are identified and located   3. Orientation of the map with the site is achieved   4. Current position in the field are identified and located, on map/plan using landmarks and ***key geographical features*** and ***Cartographic features***   5. Required destination on map/plan is identified and located   6. Map route/plan, field observations, and local knowledge are reviewed   7. Potential hazards and plan risk control measures are identified   8. Distance to destination is measured and estimated using map scale for selected route   9. Planned route on a navigation data sheet is documented in writing   10. Planned route and schedule are navigated   11. Reading, interpretation and navigation aids are used   12. Alternative routes are navigated to bypass obstacles and improve efficiency of route or course   13. Clear and concise communication are maintained during navigation activity |
| 1. Document activity | * 1. Required interpretation is completed according to organizational requirements   2. ***Required documentation*** is completed according to organizational policies. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Different types of maps | May include, but not limited to:   * Cadastral Maps and Plans * General Reference Maps * Political Map * Physical Map * Topographic Map * Climate Map * Economic or Resource Map * Road map * Thematic Map |
| Key geographical features | May include, but not limited to:   * Natural geographic features are subdivided into biomes and landforms. Deserts, oceans and arctic areas are examples of biomes, which include all the living and nonliving features that make up that community. A biome includes plant types, animal types and climate. * Landforms are bodies of water, hills, mountains and other naturally occurring constructs that define an area. * Artificial geographic features include settlements and engineered constructs. Engineered constructs are buildings, bridges, roads and other man-made structures that define an area. Settlements encompass temporary or permanent areas in which groups of people live and work. |
| Cartographic features | May include, but not limited to:   * Types of abstract geographical features — they appear on maps but not on the planet itself, even though they are located on the planet. For example, the equator is shown on maps of the earth, but it does not physically exist. It is a theoretical line used for reference, navigation, and measurement. |
| Required Documentation | May include, but not limited to:   * Final reading, interpretation and navigating result/report * Project reports |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of Competence | A person who demonstrates competency of:   * Knowledge of the requirements, procedures and instructions for reading and interpreting of maps and specifications * Working with others to undertake and complete the reading and interpreting of maps that meet all of the required outcomes * Consistent and timely completion of the reading and interpreting of map * Locates and applies relevant documentation, policies and procedures * Implementing requirements, procedures and techniques for the safe, effective read and interpret map activities including:   + Applying problem solving skills to resolve issues to navigation route   + Applying mathematical skills, including: basic angles and geometry for compass bearings, estimation and measurement * Working effectively with others to undertake and complete read and interpret map activities that meets all of the required outcomes including:   + Communicating by speaking clearly and listening actively   + Demonstrating the practice of working with others to read and interpret maps   + Maintaining written records and reporting * Reading and interpreting of maps that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:   + Reviewing the map route/plan by identifying and using:     - symbols     - navigation data     - landmarks     - geographical features and scale * Identifying obstacles and navigating alternative routes * Undertaking a minimum 2 km navigation following established route * Traversing a 2 km route to specified destination * Orienting the map to ground and surrounds * Documenting the navigation route and details on the navigational data sheet * Communicating the planned navigation route to others |
| Underpinning Knowledge and Attitudes | Must demonstrate knowledge of:   * Features of maps including direction, scale, key, contours, symbols and abbreviations * Commonly used cadastral symbols and abbreviations * The processes for application of scales in map preparation/interpretation * Techniques for orienting/confirming the orientation of a map * Key features of formal job specifications * Site and equipment safety requirements * Project quality requirements * Basic calculations of heights, areas, volumes and grades * Civil construction terminology * Drawing conventions * Safe work method statement * Identifying fatigue management techniques * Identifying and using various types of communication systems and equipment * Engaging map reading and road navigation techniques * Identifying and interpreting types of maps, charts and scales and their uses * Determining representation of topographic features on maps and plans * Determining common scales used on maps and plans * Identifying and using features and use of a compass and factors that affect compass accuracy * Identifying the applications of a GPS * Advantages and disadvantages of different map and chart types and sources of error * Techniques for estimating distance travelled |
| Underpinning Skills | Must demonstrate skills to:   * Apply legislative, organization and site requirements and procedures * Speaking clearly and directly, listening carefully to instructions and information * Applying teamwork to a range of situations, particularly in a safety context * Solving problems such as recognising clear discrepancies between the documents (map, plan, specifications) and the actual site and taking action to correct these * Showing initiative in adapting to changing work conditions or contexts particularly when working across a variety of work areas * Managing time, particularly in organizing priorities and * Planning work * Taking responsibility for self-organization of work priorities * Applying mathematical skills, including basic calculations of heights, areas, volumes and grades * Showing a willingness to learn and to use a range of mediums to learn * Using workplace technology including the use of communication systems and the reporting/recording of results |
| Resources Implication | Assessment is required to take place in real or appropriate simulated situations, including work areas, materials and equipment, and information on workplace practices and OHS practices. |
| Methods of Assessment | Competency may be assessed through:   * Interview/Written Test * Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Identify Land and Property Boundaries** |
| **Unit Code** | **[AGR CLR2 09 1117](#AGR_CLR2_09_1116)** |
| **Unit Descriptor** | This unit covers the knowledge, skills and attitude required to perform routine activities of parcel boundary identification, split and merge in case of land related operations like: parcel boundary identification, updating base map, parcel boundary updating in case of inheritance, gift, divorce, consolidation of land needed for development activities, parcel boundary updating and splitting. It also deals with delineating administrative tiers boundaries. |

|  |  |
| --- | --- |
| **Element** | **Performance criteria** |
| 1. Plan to identify land and property boundaries | 1. Major components of land and property are identified. 2. Land and property boundaries identification tasks are planned and prepared. 3. Basic property relevant to the cadastral work is identified and acquired. 4. Critical dimensions and data for the required property boundary mark are established |
| 1. Follow procedures for performing land boundary delineation | * 1. Appropriate legislations and delineation rules are obtained for administrative boundary delineation.   2. Representative of ***local administrative*** and communities are consulted regarding boundary delineation.   3. Appropriate Map is printed by spatial service technician/administration.   4. Boundary is delineated on the map together with local government staff.   5. The sketch of the delineated boundary is submitted to the concerned technician for producing maps.   6. Legal and ***ethical requirements*** are adhered to according to organizational guidelines. |
| 1. Perform boundary delineation, parcel sub-division and consolidation | * 1. The entity/business process responsible for conducting boundary delineation, parcel sub division/consolidation is identified and the authority to act on the case is established.   2. The case for boundary delineation, ***parcel sub division*** and ***consolidation*** issue is clearly specified and articulated in relation to the pertinent land laws and regulations.   3. The boundary delineation, parcel subdivision and neighboring parcels and right of ways are clearly identified by the responsible operator for obtaining ample information by overlaying accessed ***layers***: aerial photograph, satellite image, and base map.   4. Field verification is conducted and measuring is performed through surveying for boundary delineation, parcel sub-division and consolidation.   5. Field sketch is performed for the boundary delineation, parcel sub-division and consolidation according to the template sketch standard operation for later integration of the sketch in GIS/CAD software. |
| 1. Update boundary delineation, parcel sub-divisions and consolidation on GIS/CAD software | * 1. The aerial photograph/satellite image of the area is opened on GIS software preferably (and if not available on CAD).   2. The updated parcel sub-division and consolidation sketch are entered on GIS software preferably (and if not available on CAD).   3. Standardized Unique Parcel Property Identification Number (UPIN) is given for the updated parcel with other ***personnel staff members*** in line with national standard of UPIN.   4. The sketch of the area is scanned and entered on digital form for later verification in case of land auditing and synchronization operation.   5. Updated Data files are stored according to organizational guidelines. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Local administrative | May include, but not limited to:   * Zone * Wereda * Kebele * Pas |
| Ethical requirements | May include, but not limited to:   * access to personnel records * confidentiality * privacy |
| Parcel sub divisions | May include the following cases but not limited to:   * Inheritance. * Parcel boundary dispute. * Court order. * Regularization and adjudication. * Plan Implementation * Land development. |
| Parcel consolidation | May include the following cases but not limited to:   * In case of land reclaiming for renewal areas. * Real estate development. * Public institutions development activities. * Condominium housing development. * Plan Implementation |
| Layers | May include, but not limited to:   * Ortho- photo map * Topography map * Local Development Plan. * Structural Plan * Previous cadastral map. * Town Control Network |
| Personnel staff members | May include, but not limited to:   * Land Administration Experts/Technicians * Land information management Experts/Technicians. * GIS Experts/Technicians * Land Valuation Experts/Technicians * Land Management and Development Operators. * Land management and Development Mangers. * Cadastral Survey and Mapping Technicians |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of Competence | Competency must provide evidence of:   * Familiarity with Basic terminologies of GIS and remote sensing. * Familiarity with simple and basic visual identification of features from satellite and/or aerial photograph images. * Surveying activities are performed using tape, Surveyors compass, theodolite, GNSS/hand held GPS * Interpret and read maps. * Perform real property based field sketch. * Draw/digitize real property based field sketch in GIS software. * Familiarity with basic surveying knowledge and skill. |
| Underpinning Knowledge and Attitudes | Demonstrate knowledge in:   * Visual identification and interpretation of features from images. * Basics of surveying terminologies.. * Basics of GIS/remote sensing terminologies. * Basics of site drawing. * Map reading principles and Ethics. |
| Underpinning Skills | Demonstrate skills to:   * Interpret images for features identification. * Perform surveying using tape Surveyors compass, theodolite, GNSS/hand held GPS and Planimetry * Perform sketch on the field. * Operate GIS and CAD software for data entry and updating. |
| Resources Implication | Access is required to take place real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices. |
| Methods of Assessment | Competency may be assessed through:   * Interview/Written Test * Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competency may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Produce Basic Maps** |
| **Unit Code** | **[AGR CLR2 10 1117](#AGR_CLR2_10_1116)** |
| **Unit Descriptor** | This unit of competency specifies the outcomes required to use mapping software to produce a basic map. This unit covers activities to prepare and process basic spatial data and produce a basic map, which includes simple marginal information and content, to meet task specifications. |

|  |  |
| --- | --- |
| **Element** | **Performance criteria** |
| 1. Prepare to create basic map. | * 1. Task requirements are clarified with appropriate persons.   2. Equipment and software are identified and selected according to task and organizational requirements. |
| 1. Identify data source for basic map preparation | * 1. Analogue data source are identified   2. ***Digital data source***isidentified   3. ***Analog data source*** are prepared to convert into digital data |
| 1. Compile map content. | * 1. Map marginal information and content are prepared according to task specifications.   2. Spatial data is processed to prepare map content according to task specifications. |
| 1. Finalize basic map production. | * 1. Map is produced in required format and content according to task requirements.   2. Map content and format are checked against task requirements in consultation with appropriate persons.   3. Map is finalized and documentation completed and authenticated according to organizational requirements. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Task requirements | May include, but not limited to:   * Coordinate system * Format of map * Map content * Marginal information * Spatial data to be used * Type of map. |
| Appropriate persons | Must include at least one of the following:   * Experienced colleague * Supervisor or line manager. |
| Digital data source | May include, but not limited to:   * Coordinate data in different format * Scanned document * Digitally stored aerial photo and satellite image |
| Analogue data source | May include but not limited :   * Topographic maps * Thematic maps * Any hard copy map |

|  |  |
| --- | --- |
| **Evidence guide** | |
| Critical Aspects of Competence | Competency must provide evidence of:   * Use suitable software to produce two basic maps containing the following: * Two man-made features and two natural features and their symbology depicting data by points, lines and polygons * Data that has been geo-processed from retrieved spatial data * Simple marginal information, including: * Data sources * Geo-referencing system * Legend * North point * Scale * While producing the above basic maps, the person must: * Communicate clearly when clarifying work tasks * Comply with organizational requirements regarding health and safety and completing records and documentation * Use a computer, printer and required ancillary hardware * Use basic software mapping functions to: * Apply scale * Change data appearance * Change symbology * Import simple point, line and areal data * Label features * Pan zoom * Perform simple thematic mapping * Symbolize features by attributes. * Apply datum and projections to map * Read data attributes and numerical data. * Ask questions to clarify task requirements. * Interpret instructions in standard operating procedures * Interpret spatial data, software menus and messages. * Label marginal information and map content. * Use mapping functions of basic software to format maps that meet task specifications. |
| Underpinning Knowledge and Attitudes | Demonstrate knowledge in:   * Functions of mapping software suitable for making basic maps * Key geographic feature types and how they are portrayed in mapping software, including using points, lines and polygons * Key features of coordinate systems, datums and projections * Common types of maps used for surveying and spatial information services * Organizational policies and guidelines relating to basic map production * Typical scales used on different types of maps * Typical spatial referencing systems used on different types of maps * Typical symbology used on different types of maps. |
| Underpinning Skills | Demonstrate skills to:   * Interpret images for features identification. * Perform surveying using tape total station , hand held GPS/GNSS and Planimetry * Perform scanning and printing using scanner and plotter respectively * Perform sketch on the field. * Operate GIS and CAD software for data entry and updating. |
| Resources Implication | Access is required to take place real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices. |
| Methods of Assessment | Competency may be assessed through:   * Interview/Written Test * Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competency may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Maintain Information Recording System** |
| **Unit Code** | **[AGR CLR2 11 1117](#AGR_CLR2_11_1116)** |
| **Unit Descriptor** | This unit covers knowledge, skills and attitude in creating new files, removing files that are no longer active and maintaining the enterprise’s filing system. |

|  |  |
| --- | --- |
| **Elements** | **Performance Criteria** |
| 1. Create new files | 1. Information to be incorporated in ***new files*** is collected and collated. 2. ***New files are established*** in an accurate and up-to-date manner. 3. New file is placed on ***file*** ***recording system***. 4. ***New files are indexed***. |
| 1. Identify and process inactive and dead files | 1. Files are sorted by ***appropriate codes***. 2. ***Inactive*** and ***dead files*** are identified and removed and/or relocated. |
| 1. Record documentation movements | 1. Movement of all documentation including registry, data base and ***indices*** are recorded. 2. Overdue records and documentation are identified and a system for their return implemented. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| New files | May include, but not limited to:   * Kebele map/image as a base map scanned field map * Scanned document Field Registration Format (FRF) * Scanned dispute forms * New Minutes. * Common files: Atlas file/parcel maps, * Project files and public display maps |
| Establishing new files | May include, but not limited to:   * Creating or assigning a name or number to the file * Creating a client folder in accordance with enterprise procedures * Creating an index card for the new file * Documenting the new file in a file register or data base |
| A file recording system | May include, but not limited to:   * A paper-based file register * A computerized file database * A card index system |
| Indexing new files | May include, but not limited to:   * Determining logical sequence of the document/file * Indexing by subject * Indexing by alphabetical order * Indexing by numerical order |
| Appropriate codes | May include, but not limited to:   * A file number * A logical keyword * A relevant subject area * A color |
| Inactive files | May include, but not limited to:   * Files which contain information that is no longer used but may be needed in the future (e.g. Past client information, workplace safety incident report) |
| Dead files | May include, but not limited to:   * Closed files which are no longer used but must be kept for legal or reporting purposes (e.g. Tax, records, accounting records) * Closed files which are to be archived for historical or research purposes.(e.g. Photographs, back issues of enterprise publications |
| Indices | May include, but not limited to:   * A card index * A paper index * An image-based index (micro-fiche) * An electronic index/database |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of Competence | Critical evidence of knowledge and skills include:   * Follow enterprise policies and procedures * Collect and collate information to be incorporated in new file * Create new file document in file register or database * Classify new file and incorporate into the filing system in a logical and correct manner * Sort files by appropriate codes * Identify inactive and/or dead files * Remove inactive and/or dead files from the working filing system and file in secondary storage * Store all records * Retrieve archived, compressed electronic and other files from secondary storage as necessary * Record file movement * Adhere to the procedure for accessing restricted files and the record movement of these files * Follow up overdue files * Report lost files |
| Underpinning Knowledge and Attitudes | Demonstrate knowledge of:   * File recording system * Indexing system * Procedures for classifying and sorting files * Difference between inactive and dead files * Understanding the nature of restricted files * Application of enterprise policies and procedures required across the full range of tasks covered |
| Underpinning Skills | Demonstrate skills of:   * Literacy: follows and interprets enterprise policies and procedures; sorts and classifies information by alphabet, numbers, date, or other established principles; identifies obsolete files * Writes clear sequenced written instructions, e.g. How to use filing system, record document movement * Research: identifies correct procedures for creation of new files * Numeracy: indexes, codes and sorts files numerically; cross-references information and files where appropriate * Technology: uses appropriate technological materials in order to establish and maintain filing system * Communication: listens to clear sequenced instructions of several steps to complete task; questions to clarify status of file; gives oral instructions, e.g. where to locate file; negotiates and consults with colleagues regarding information * Problem solving: identifies problems and implements solutions according to enterprise procedures and prior knowledge; checks precedence for collating and filing information |
| Resource Implications | The following resources must be provided:   * Work plans and schedules, policy documents and duty statements instruments like personal planner and record book relevant guidelines, regulations and codes of suitable venue and equipment. |
| Methods of Assessment | Competence may be assessed through:   * Interview/Written Test * Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competency may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Assist Adjudication, Registration and Certification Activities for Legal Cadastre** |
| **Unit Code** | **[AGR CLR2 12 1117](#AGR_CLR2_12_1116)** |
| **Unit Descriptor** | This Unit Titlespecifies the outcomes required to assist with field support services for Adjudication, Registration and Certification Activities for Legal Cadastre. It requires the ability to identify and describe adjudication/ ascertainment, registration/certification and mapping of right to land, and to work under instruction to assist the process of adjudication, registration, demarcation and mapping for legally recognized rights, and undertake tenure documentation activities as directed. It also requires the ability to apply communication, interpersonal and teamwork skills, and the use of technology. The skills and knowledge of this unit would support the needs of new employees in the rural land administration services sector in positions such as field hands and data collection assistants. |

|  |  |
| --- | --- |
| **Element** | **Performance Criteria** |
| 1. Identify and describe adjudication/ ascertainment, registration/ certification and mapping of right to land | * 1. Adjudication/ ascertainment is identified and described in accordance with organizational rural land registration and cadastral manual.   2. Registration is identified and described in accordance with organizational rural land registration and cadastral manual.   3. Cadastre is identified and described in accordance with organizational rural land registration and cadastral manual.   4. Certification is identified and described in accordance with organizational rural land registration and cadastral manual.   5. ***Potential benefits of land titling/Certification*** and impacts of land registration are identified and described.   6. ***Constraints of implementation*** of land registration and certification are identified and described. |
| 1. Prepare for field support tasks for adjudication, registration and certification activities | * 1. Adjudication, registration and certification tasks/work instructions are received and clarified with ***relevant personnel*** and according to ***organizational guidelines***.   2. ***Tools, equipment and supplies***, ***source of data and information*** and group of community appropriate to the Adjudication, registration and certification tasks/work are identified and sourced according to supervisors’ instruction.   3. ***Methods of land registration*** and adjuration are identified.   4. ***Personal protective equipment*** are used according to OHS guidelines. |
| 1. Assist preliminary procedures before adjudication, registration and certification activities | * 1. ***Supports tasks*** of organizing participant community group in registration are carried out under supervision.   2. Supports tasks in public information and awareness creations (PIA) for different target groups are conducted.   3. Convincing of communities and welcoming of the adjudication process are assisted.   4. Establishment and training of land administration committees is assisted.   5. The legal format preparation and documentation are assisted as evidence of legal agreement reached among ***adjoining landholders***.   6. Local parcel boundary marking materials are delivered as instructed.   7. The delineation process from aerial photograph or Cadastre or topography map for easy identification of features of area of jurisdiction is assisted.   8. The block of cadastral ***base map*** preparation is assisted as the adjudication process should comply with administrative/political boundary framework.   9. Preparation and printing of field maps and different forms are assisted.   10. The process of application and identification of land holders and parcels are assisted.   11. Occupational Health and safety is maintained. |
| 1. Assist adjudication, registration, demarcation and mapping process | * 1. Procedures are identified organizational guidelines and applied.   2. ***Resources*** are arranged for in accordance with work place procedures and instructions   3. Basic surveying techniques are applied according to work place procedures and instructions.   4. Information and materials collection process from field sheet are assisted based on requirements.   5. Identification and demarcation of boundaries are assisted.   6. Digitization and encoding process of adjudicated and demarcated rights are assisted.   7. Registration activities are assisted in accordance with work place procedures and instructions. |

|  |  |
| --- | --- |
| 1. Assist certification process | * 1. Data quality assessment and formatting processes are assisted.   2. Preparations of book of holding and primary certificates are assisted.   3. Production of parcel map is assisted based on instruction. |
| 1. Assist documentation and completion of tasks | * 1. Adjudication, registration and certification for legal cadastre documents including electronic and paper based documents are reviewed as directed.   2. ***Required documentation*** is completed as directed   3. Tools and equipment are inspected and, where appropriate, referred for repair.   4. Tools and equipment are cleaned and stored in a secure location. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Potential Benefits of land Titling/Certification | May include, but not limited to:   * Guarantee ownership and security tenure * Reduce land disputes * Provide security for credit * Facilitate the management and protection of state lands * Facilitate rural land reform * Support for land and property taxation * Develop and monitor land markets * Improve urban planning and infrastructure development * Protect land resources and support environmental management * Produce statistical data. |
| Constraints of implementation | May include, but not limited to:   * Technical issues and constraints: * Institutional issues and constraints * Legal issues and constraints: * Economic issues and constraints: |
| Relevant personnel | May include, but not limited to:   * Colleagues * Staff or employee representatives * Supervisors or line managers * Suppliers * users |
| Organizational  Guidelines | May include, but not limited to:   * Code of ethics * Company guidelines * Legislation relevant to the work or service function * Manuals * OHS policies and procedures * Personnel practices and guidelines outlining work roles and responsibilities |
| Tools, equipment and supplies | May include, but not limited to:   * Pocket stereoscope, Hand held GPS, Audio tape, rope, HHGPS, total station, line level, string, graduated staff, measuring tape, digging instruments, ranging pole, pegs, compass, top maps, automatic level, clip board, drawing materials, data recording equipment * Personal computer-based digitizing boards, vehicles |
| Methods of land registration | May include, but not limited to:   * Traditional/non-conventional way of registration * Conventional/ modern way of registration |
| Source of data and information | May include, but not limited to:   * Federal and regional land administration and use proclamation, property right regulations, owner ship Right Book * Community and land administration committees * Organizational rules, regulation and guidelines * Internet, related books and related materials * Technical manuals * Sharing best practice * Virtual library * Workplace guidelines * Recorded documents/logo/history |
| Personal protective  equipment | May include, but not limited to::   * Breathing apparatus * Gloves * Helmets * Overalls * Masks and respirators * Safety boots * Safety glasses * Safety vests * Sun protection equipment |
| Supports tasks | May include, but not limited to:   * Inspecting, maintaining cleaning and storing equipment * Identifying, determining and marking positions * Obtaining and delivering supplies * Recording data * Documentation and Driving |
| Adjoining landholders | May include, but not limited to:   * Neighbours sharing common parcel boundary who agree on who owns what land and the legal extent of land during land adjudication |
| Base map | May include, but not limited to:   * A land use map prepared differentiating land use/land cover like grazing land, forest, and farming area and other land uses by overlaying orthophoto, aerial photograph, satellite image and physical plan |
| Resources | May include, but not limited to:   * Personnel * Equipment and technology * Services * Supplies and materials * Sources for accessing specialist advice * Budget |
| Required documentation | May include, but not limited to:   * Electronic or paper-based correspondence with client * Final report * Records of conversation * Organizational work activity sheets * Control point list * Previous adjoining block diagram. |
| Security of tenure | * Is a general term for several conditions describing the relationship between individuals and their land. |
| Occupational Health & safety | May include, but not limited to:   * OHS identification, risk assessment and control * Implement procedures for dealing with conflict resolution * Hazards may include disturbance or interruption of services, solar radiation, parcel possessed by several landholders, dust, sharp hand tools and equipment, manual handling, falling objects, and uneven Surfaces. |
| Electronic or paper-based documents | May include, but not limited to:   * Kebele map/image as a base map scanned field map * Scanned document/FRF * Scanned dispute forms * New Minutes. * Atlas file/parcel maps project document * Public display map |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of competence | Assessment requires evidence that the candidate:   * Identify work procedures * Inspect and be familiar with the history of land acquisition * Negotiate adjoining land holders and witnesses * Performs basic surveying * Demarcate legal extent of holders * Inspect the area on tax bill of old occupant * Obtain measured area * Assist assurance of new title provision or temporary certificate * Inspect any title defect on certificate * Implement government laws and regulations * Meet timelines of assisting surveying and boundary delineation * Ensure reconciliation prior to settlement * Assist implementation of government procedures. * Assist preparation of contingency plans for unfulfilled contractual obligations * Assist conflict resolution * Apply basic surveying techniques * Collect, inspect and store tools and equipment * Assist development and printing of map |
| Underpinning knowledge | Demonstrate knowledge of:   * Local knowledge of socio-cultural conditions * Legal cadastre principles * Parcel size standard regulations * Land regularization, adjudication and consolidation * Site surveying * Land tenure legislation, tenure types and the effect of these maps, plans, title documents and related legal matters * Quality control on surveying accuracy * Interpreting orthophoto, aerial photograph and/or satellite imagery. * Practice procedures * Process assistance * Quality assurance * Communication * Spread sheets and basic database management programs * Identifying legal official agreements * Basic principles of survey * Operating basic survey instruments * Proper handling techniques of instruments * Map development techniques * Dealing with conflicts |
| Underpinning skills | Demonstrates skills to:   * Assist * Work in teams * Safe work practices * Communicate with communities * Interpret orthophoto, aerial photograph or satellite image. * Land consolidation * Legal format preparation * Negotiate * Communicate in a range of business environments with diverse people * Plan contingency measures * Analyze the responses of third parties * Negotiate with a range of people in diverse situations * Manage time efficiently * Solve problems * Operate appropriate technology for data storage and archiving * Advocate on a range of issues * Obtain ongoing instructions |
| Resources Implication | Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices. |
| Methods of Assessment | Competence may be assessed through:   * Interview/Written Test * Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Operate within community culture and values** |
| **Unit Code** | **[AGR CLR2 13 1117](#AGR_CLR2_13_1116)** |
| **Unit Descriptor** | This competency standard covers the process of exploring and understanding the culture and values of a community or group and operating appropriately within those ranges. It requires the ability to identify community values, research community history and plans, and establish role of groups within the community. Operating within community cultures and goals requires knowledge of relevant government and community action programs, broad national and regional history, current social and environment affairs for local community and wider region, processes for identifying cultural protocols and understanding of what may be noteworthy to community and newsworthy to media. |

|  |  |
| --- | --- |
| **Element** | **Performance Criteria** |
| 1.Identify community culture and values | * 1. ***Range of groups*** in community is identified through interaction with community members and groups to determine potential diversity of values*.*   2. Values held by various sections of the community relevant to land administration and use ***program activities*** are identified for planning of promotional and group activities.   3. ***Cultural institution authority*** is identified in Indigenous communities and groups to implement appropriate protocols.   4. ***Community leaders*** in terms of community involvement and opinion making are identified from community interaction. |
| 2. Explore community history and plans. | 1. ***History of community*** relevant to land administration and use program is identified for use in promotional, educational and group activities. 2. Relevant documents, symbols, places of value and oral traditions are identified to place program and group in local context. 3. ***Community plans*** related to land administration and use are identified for the use of promotional, educational and group activities. |
| 3. Establish role of group in community | 1. Potential roles of land administration and use program and group to community are identified for use in group activities. 2. Interaction with community is managed to build rapport with individuals and groups. 3. ***Consultation processes*** are established and maintained with community members and groups. 4. Image of group and program in community is maintained by acknowledging community concerns and promoting positive image of group and program. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Range of groups | May include, but not limited to:   * Formal or informal groupings based on social activities and interests, * Family and community history, * Cultural backgrounds including ethnicity * Sex and age |
| Program activities | May include, but not limited to:   * To form and/or develop a community group, * To promote solutions or * Explain issues relating to the environment or * Other government program, * Project activities, and * Fund raising and submissions |
| Cultural institution authority | May include, but not limited to:   * Traditional community leaders, communities and groups, and protocols identified from group or contacts with other networks |
| Community leaders | May include, but not limited to:   * People in formal positions as a result of position/occupation or community role or having informal influence over community or group opinion, in a position to promote or sponsor events and activities, able to allocate resources, and elders in communities |
| History of community | May include, but not limited to:   * Events, * understanding of past events or places considered important by community or groups within the community, and spiritual connections |
| Community plans | May include, but not limited to:   * Informal desires of community to better itself, * Local or regional plans, * By local governments or other bodies, and * Local implementation of the state |
| Consultation processes | May include, but not limited to:   * Complying with values and respecting cultural authority addressing issues that may impact on values, including discussion where relevant with communities and groups on natural resource and environment management |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of Competence | A candidate must able to :   * Interpret organizational rules, regulation and guidelines * Identify community values * Establish role of group in community * Describe consultation processes |
| Underpinning Knowledge and Attitude | Demonstrate knowledge of:   * Organizational rules, regulation and guidelines * Potential diversity of values * Planning of promotional and group activities. * Relevant documents, symbols, places of value and oral traditions * Formal or informal groupings * Consultation processes * Promoting positive image of group and program. |
| Underpinning Skills | Demonstrate ability to:   * Identify community values * Explore community history and plans. * Establish role of group in community |
| Resources Implication | Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices. |
| Methods of Assessment | Competence may be assessed through:   * Interview/Written Test * Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Participate in Workplace Communication** |
| **Unit Code** | **[AGR CLR2 14 1117](#AGR_CLR2_14_1116)** |
| **Unit Descriptor** | This unit covers the knowledge, skills and attitudes required to gather, interpret and convey information in response to workplace requirements. |

|  |  |
| --- | --- |
| **Elements** | **Performance Criteria** |
| 1. Obtain and convey workplace information | 1. Specific and relevant information is accessed from ***appropriate sources***. 2. Effective questioning, active listening and speaking skills are used to gather and convey information. 3. Appropriate ***medium*** is used to transfer information and ideas. 4. Appropriate non- verbal communication is used. 5. Appropriate lines of communication with supervisors and colleagues are identified and followed. 6. Defined workplace procedures for the location and ***storage*** of information are used. 7. Personal interaction is carried out clearly and concisely. |
| 1. Participate in workplace meetings and discussions | 1. Team meetings are attended on time. 2. Own opinions are clearly expressed and those of others are listened to without interruption. 3. Meeting inputs are made consistent with the meeting purpose and ***protocols*** established. 4. ***Workplace interactions*** are conducted in a courteous manner. 5. Questions about simple routine workplace procedures and matters concerning working conditions of employment are asked and responded. 6. Meetings outcomes are interpreted and implemented. |
| 1. Complete relevant work related documents | 1. Range of ***forms*** relating to conditions of employment is completed accurately and legibly. 2. Workplace data is recorded on standard workplace forms and documents. 3. Basic mathematical processes are used for routine calculations. 4. Errors in recording information on forms/documents are identified and properly acted upon. 5. Reporting requirements to supervisor are completed according to organizational guidelines. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Appropriate sources | May include, but not limited to:   * + Team members   + Suppliers   + Trade personnel   + Local government and Industry bodies |
| Medium | May include, but not limited to:   * + Memorandum   + Circular   + Notice   + Information discussion   + Follow-up or verbal instructions & Face to face communication |
| Storage | May include manual filing and computer-based filing systems |
| Protocols | May include, but not limited to:   * + Observing meeting   + Compliance with meeting decisions   + Obeying meeting instructions |
| Workplace interactions | May include, but not limited to:   * + Face to face   + Telephone   + Electronic and two way radio   + Written including electronic, memos, instruction and forms, non-verbal including gestures, signals, signs and diagrams |
| Forms | May include but not limited to personnel forms, telephone message forms, safety reports |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of Competency | Demonstrates skills and knowledge to:   * + Prepare written communication following standard format of the organization   + Access information using communication equipment   + Make use of relevant terms as an aid to transfer information effectively   + Convey information effectively adopting the formal or informal communication |
| Underpinning Knowledge and Attitudes | Demonstrate knowledge of:   * + Effective communication   + Different modes of communication   + Written communication   + Organizational policies   + Communication procedures and systems   + Technology relevant to the enterprise and the individual’s work responsibilities |
| Underpinning Skills | Demonstrate skills to:   * + Follow simple spoken language   + Perform routine workplace duties following simple written notices   + Participate in workplace meetings and discussions   + Complete work related documents   + Estimate, calculate and record routine workplace measures   + Do basic mathematical processes of addition, subtraction, division and multiplication   + relate to people of social range in the workplace   + Gather and provide information in response to workplace Requirements |
| Resource Implications | Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices. |
| Methods of Assessment | Competence may be assessed through:   * + Interview/Written Test   + Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Work in Team Environment** |
| **Unit Code** | **[AGR CLR2 15 1117](#AGR_CLR2_15_1116)** |
| **Unit Descriptor** | This unit covers the skills, knowledge and attitudes to identify role and responsibility as a member of a team. |

|  |  |
| --- | --- |
| **Elements** | **Performance Criteria** |
| 1. Describe team role and scope | * 1. The ***role and objective of the team*** are identified from available ***sources of information***.   2. Team parameters, reporting relationships and responsibilities are identified from team discussions and appropriate external sources. |
| 1. Identify own role and responsibility within team | * 1. Individual role and responsibilities within the team environment are identified.   2. Roles and responsibility of other team members are identified and recognized.   3. Reporting relationships within team and external to team are identified. |
| 1. Work as a team member | * 1. Effective and appropriate forms of communications are used and interactions undertaken with team members who contribute to known team activities and objectives.   2. Effective and appropriate contributions are made to complement team activities and objectives, based on individual skills and competencies and ***workplace context***.   3. Protocols are observed in reporting using standard operating procedures.   4. Contribution is made to the development of team work plans based on an understanding of team’s role and objectives and individual competencies of the members. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Role and objective of team | May include, but not limited to:   * + Work activities in a team environment with enterprise or specific sector   + Limited discretion, initiative and judgment maybe demonstrated on the job, either individually or in a team environment |
| Sources of information | May include, but not limited to:   * + Standard operating and/or other workplace procedures   + Job procedures   + Machine/equipment manufacturer’s specifications and instructions   + Organizational or external personnel   + Client/supplier instructions   + Quality standards   + OHS and environmental standards |
| Workplace context | May include, but not limited to:   * + Work procedures and practices   + Conditions of work environments   + Legislation and industrial agreements   + Standard work practice including the storage, safe handling and disposal of chemicals   + Safety, environmental, housekeeping and quality guidelines |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of Competence | Demonstrates skills and knowledge to:   * + Operate in a team to complete workplace activity   + Work effectively with others   + Convey information in written or oral form   + Select and use appropriate workplace language   + Follow designated work plan for the job   + Report outcomes |
| Underpinning Knowledge and Attitude | Demonstrate knowledge of:   * + Communication process   + Team structure   + Team roles   + Group planning and decision making |
| Underpinning Skills | Demonstrate skills to:   * + Communicate appropriately, consistent with the culture of the workplace |
| Resource Implications | Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices. |
| Methods of Assessment | Competence may be assessed through:   * + Interview/Written Test   + Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Develop Business Practice** |
| **Unit Code** | **[AGR CLR2 16 1117](#AGR_CLR2_16_1116)** |
| **Unit Descriptor** | This unit covers knowledge, skills and attitude required to establish a business operation from a planned concept. It includes researching the feasibility of establishing a business operation, planning the setting up of the business, implementing the plan and reviewing operations once commenced, customer handling, developing and maintaining business relationships. |

|  |  |
| --- | --- |
| **Elements** | **Performance Criteria** |
| 1. Identify business opportunities and business skills | 1. The concept of paradigm shift and means of divergent thinking are elaborated and strategies to look beyond the boundaries are discussed. 2. ***Unusual business opportunities*** are identified. 3. Feasibility on ***business skills and personal attributes*** is assessed and matched against those perceived as necessary for a particular business opportunity. 4. New behavior on how problems can be the pivotal source of business opportunity is elaborated and experience taken. 5. Assistance sought with feasibility study of ***specialist and relevant parties*** is discussed, as required. 6. Impact of emerging or changing technology, including e-commerce, on business operations is evaluated. 7. Practicability of business opportunity is assessed in line with perceived ***business risks***, returns sought, personal preferences and resources available. 8. Business plan is revised in accordance with the identified opportunities. |
| 1. Plan for the establishment of business operation | * 1. Organizational structure and operations are determined and documented.   2. Procedures are developed and documented to guide operations.   3. Financial backing is secured for business operation.   4. Business legal and regulatory requirements are identified and compiled.   5. ***Human and physical resources*** required to commence business operation are determined.   6. Recruitment and procurement strategies are developed. |
| 1. Implement business development plan | * 1. Physical and human resources are obtained to implement business operation.   2. ***Operational unit*** is established to support and coordinate business operation.   3. Simulations on the development plan are well discussed and understood.   4. Implementation manual is discussed and understood.   5. Marketing the business operation is undertaken.   6. Monitoring process is developed and implemented for managing operation.   7. ***Legal documents*** are carefully maintained and relevant records kept and updated to ensure validity and accessibility.   8. Contractual procurement rights for goods and services including ***contracts with relevant people*** are negotiated and secured as required in accordance with the business plan.   9. Options for leasing/ownership of business premises are identified and contractual arrangements completed in accordance with the business plan. |
| 1. Review implementation process and take corrective measures | * 1. Review process is developed and implemented for implementation of business operation.   2. Improvements in business operation and associated management process are identified.   3. Identified improvements are implemented and monitored for effectiveness. |
| 1. Establish contact with customers and clarify needs of customer | * 1. Persuasion strategies are developed and discussed.   2. Welcoming customer environment is maintained and Customer is greeted warmly according to enterprise policies and procedures.   3. Information is provided to satisfy customer needs.   4. Information on customers and service history is gathered for analysis.   5. Customer data is maintained to ensure database relevance and currency.   6. Customer needs are accurately assessed against the products/services of the enterprise.   7. Customer details are documented clearly and accurately in required format.   8. Negotiations are conducted in a business-like and professional manner.   9. Benefits for all parties are maximized in the ***negotiation through use of established techniques*** and in the context of establishing long term relationships.   10. The results of negotiations are communicated to appropriate colleagues and stakeholders within appropriate timeframes.   11. ***Opportunities to maintain regular contact*** with customers are identified and taken-up. |
| 1. Develop and Maintain Business Relationship | * 1. Features and benefits of products/services provided by the enterprise are described/ recommended to meet customer needs.   2. Alternative sources of information/advice are discussed with the customer.   3. Information needed is pro-actively sought, reviewed and acted upon to maintain sound business relationships.   4. Agreements are honored within the scope of individual responsibility.   5. Adjustments to agreements are made in consultation with the customer and information shared with appropriate colleagues.   6. Relationships are nurtured through regular contact and use of effective interpersonal and communication styles. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| Unusual Business opportunities | May include, but not limited to:   * Public holidays * Ceremonies * Natural disaster * Campaigns |
| Business opportunities | May include, but not limited to:   * Expected financial viability * Skills of operator * Amount and types of finance available * Returns expected or required by owners * Likely return on investment * finance required * Lifestyle issues |
| Business skills and personal attributes | May include, but not limited to:   * Technical and/ or specialist skills * Managerial skills * Entrepreneurial skills * Taking calculated risk skills * Willingness to take calculated risks * Willingness to work under pressure |
| Specialist and relevant parties | May include, but not limited to:   * Chamber of commerce * Financial planners and financial institution representatives, business planning specialists and marketing specialists * Accountants * Lawyers and providers of legal advice * Government agencies * Industry/trade associations * Online gateways * Business brokers/business consultants |
| Business risks | May include, but not limited to:   * Occupational health and safety * Environmental risks * Relevant legislative requirements * Security of investment * Market competition * Security of premises/location * Supply and demand * Resources available |
| Human and physical resources | May include, but not limited to:   * Software and hardware * Office premises and equipment * Communications equipment * Specialist services through outsourcing, contracting and consultancy * Staff * Vehicles |
| Operational unit | May include, but not limited to different departments, sections, teams, divisions, etc. staffed with required personnel and equipped to service and support business |
| Legal documents | May include, but not limited to:   * Partnership agreements, constitution documents, statutory books for companies (register of members, register of directors and minute books), certificate of Incorporation, franchise agreements and financial documentation, appropriate software for financial records * Occupational Health and Safety (OHS) * Recordkeeping including personnel, financial, taxation, and environmental |
| Contracts with relevant people | May include, but not limited to:   * business owners, suppliers, employees, agents, land owners, distributors, customers or any person with whom the business has, or seeks to have, a performance-based relationship |
| Negotiation techniques | May include, but not limited to:   * Identification of goals, limits * Clarification of needs of all parties * Listening and questioning * Non-verbal communication techniques * Appropriate language and situation * Bargaining * Developing options * Appropriate cultural behavior * Confirming agreements |
| Opportunities to maintain  regular contact | to maintain regular contact with customers May include, but not limited to:   * Informal social occasions * Ceremonies * Exhibitions * Industry functions * Association membership * Co-operative promotions * Program of regular telephone contact |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of Competence | Demonstrates knowledge and skills in:   * That a business operation has been planned and implemented from initial research of feasibility of the business and completion of the plan, through implementing the plan and commencing operations * The ability to evaluate the results of research and assess the likely viability and practicability of a business opportunity, taking into account the current business/market climate and resources available * Treating customers in a courteous and professional manner * Building and maintaining relationships to achieve successful business outcomes |
| Underpinning Knowledge and Attitudes | Demonstrate knowledge of:   * Paradigm shift * Unusual business opportunities * Feasibility study * Business structure * Federal and regional government legislative requirements affecting business operations, especially in regard to OHS, EEO, industrial relations and anti-discrimination * Procurement and recruitment strategy * Operational unit * Monitoring process * Business systems and operations * Relevant marketing, management, sales and financial concepts * Options for financing * Business premises and ownership * Lease * Methods for researching business opportunities * Methods of identifying relevant specialist services to complement the business * Advertising and promotion * Distribution and logistics * Terms and conditions in contractual agreement * Record keeping duties * Operational factors relating to the business (provision of professional services, products) * Customer need assessment * Source of information * Operational knowledge of enterprise policies and procedures in regard to: * Customer service * Dealing with difficult customers * Maintenance of customer databases * Allocated duties/responsibilities * General knowledge of the range of enterprise merchandise and services, location of telephone extensions and departments/sections * Basic operational knowledge of industry/workplace codes of practice in relation to customer service * negotiation and communication techniques appropriate to negotiations that may be of significant commercial value |
| Underpinning Skills | Demonstrate skills of:   * Hunting and exploiting unusual business opportunities * Interpreting legal requirements, company policies and procedures and immediate, day-to-day demands * Conducting feasibility study * Developing new behavior * Using technology * Marketing skills * Business planning skills * Entrepreneurial skills * Time management skills * Customer handling skills * Communication skills including questioning, clarifying, reporting, and giving and receiving constructive feedback * Technical and analytical skills to interpret business documents, reports and financial statements and projections * Ability to relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities * Problem solving skills to develop contingency plans * Using computers and software packages to record and manage data and to produce reports * Interpreting business information, numeracy skills for data analysis to aid research * Negotiation to conduct business activities * Research to identify a business opportunity and to conduct a feasibility study * Analytical skills to assess personal attributes and to identify business risks * Observation skills for identifying appropriate people, resources and to monitor work * Persuasion and networking skills * Welcoming customers * Information seeking skills to collect, organize and understand information related to collating and analyzing customer information to identify needs * Establish diagnostic processes which identify and recommend improvements to customer service |
| Resource Implications | Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices. |
| Methods of Assessment | Competence may be assessed through:   * Interview/Written Test * Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |

|  |  |
| --- | --- |
| **Occupational Standard: Rural Cadastre and Land Registration Service Support Operation Level II** | |
| **Unit Title** | **Standardize and Sustain 3S** |
| **Unit Code** | **[AGR CLR2 17 1117](#AGR_CLR2_17_1116)** |
| **Unit Descriptor** | This unit of competence covers the knowledge, skills and attitudes required by worker to standardize and sustain 3S to his/her workplace. It covers responsibility for the day- to-day operations of the workplace and ensuring that continuous improvements of Kaizen elements are initiated and institutionalized. |

|  |  |
| --- | --- |
| **Elements** | **Performance Criteria** |
| 1. Prepare for work. | 1. Work instructions are used to determine job requirements, including method, material and equipment. 2. Job specifications are read and interpreted following working manual. 3. ***OHS requirements***, including dust and fume collection, breathing apparatus and eye and ear personal protection needs are observed throughout the work. 4. ***Safety equipment and tools*** are identified and checked for safe and effective operation. 5. ***Tools and equipment*** are prepared and used to implement 3S. |
| 1. Standardize 3S. | 1. Plan is prepared and used to standardize 3S activities. 2. ***Tools and techniques*** to standardize 3S are prepared and implemented based on ***relevant procedures***. 3. Checklists are followed for standardize activities and ***reported*** to ***relevant personnel***. 4. The workplace is kept to the specified standard. 5. Problems are avoided by standardizing activities. |
| 1. Sustain 3S. | 1. Plan is prepared and followed to standardize 3S activities. 2. ***Tools and techniques*** to sustain 3S are discussed, prepared and implemented based on relevant procedures. 3. Workplace is inspected regularly for compliance to specified standard and sustainability of 3S techniques. 4. Workplace is cleaned up after completion of job and before commencing next job or end of shift. 5. Situations are identified where compliance to standards is unlikely and actions specified in procedures are taken. 6. Improvements are recommended to lift the level of compliance in the workplace. 7. Checklists are followed to sustain activities and report to relevant personnel. 8. Problems are avoided by sustaining activities. |

|  |  |
| --- | --- |
| **Variable** | **Range** |
| OHS requirements | May include, but not limited to:   * Are to be in accordance with legislation/regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of firefighting equipment, enterprise first aid, hazard control and hazardous materials and substances. * Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices. * Safe operating procedures are to include, but are not limited to the conduct of operational risk assessment and treatments associated with workplace organization. * Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation. |
| Safety equipment and tools | May include, but not limited to:   * Dust masks/goggles * Glove * Working cloth * First aid and safety shoes |
| Tools and equipment | May include, but not limited to:   * Paint * Hook * Sticker * Signboard * Nails * Shelves * Chip wood * Sponge * Broom * Pencil * Shadow board/Tools board |
| Tools and techniques | May include, but not limited to:   * 5S Job Cycle Charts * Visual 5S * The Five Minute 5S * Standardization level checklist * 5S checklist * The five Whys and one How approach(5W1H) * Suspension * Incorporation and Use Elimination |
| Relevant procedures | May include, but not limited to:   * Assign 3S responsibilities * Integrate 3S duties into regular work duties * Check on 3S maintenance level * OHS measures such as signage, symbols / coding and labeling of workplace and equipment * Creating conditions to sustain your plans * Roles in implementation |
| Reporting | May include, but not limited to:   * Verbal responses * Data entry into enterprise database * Brief written reports using enterprise report formats |
| Relevant personnel | May include, but not limited to:   * Supervisors, managers and quality managers * Administrative, laboratory and production personnel * Internal/external contractors, customers and suppliers |
| Tools and techniques | May include, but not limited to:   * 5S slogans * 5S posters * 5S photo exhibits and storyboards * 5S newsletter * 5S maps * 5S pocket manuals * 5S department/benchmarking tours * 5S months * 5S audit * Awarding system * Big cleaning day * Patrolling system May include, but not limited to: * Top management Patrol * 5S Committee members and Promotion office Patrol * Mutual patrol * Self-patrol * Checklist and Camera patrols |

|  |  |
| --- | --- |
| **Evidence Guide** | |
| Critical Aspects of Competence | Demonstrates skills and knowledge to:   * Discuss the relationship between Kaizen elements. * Standardize and sustain 3S activities by applying appropriate tools and techniques. |
| Underpinning Knowledge and Attitudes | Demonstrates knowledge of:   * Elements of Kaizen * Ways to improve Kaizen elements * Benefits of improving kaizen elements * Relationship between Kaizen elements * The fourth pillar of 5S * Benefits of standardizing and sustaining 3S * Procedures for standardizing and sustaining 3S activities * Tools and techniques to sustain 3S * Relevant Occupational Health and Safety (OHS) and environment requirements * Plan and report * Method of communication |
| Underpinning Skills | Demonstrates skills of:   * Improving Kaizen elements by applying 5S * Standardizing and sustaining procedures and techniques to avoid problems * Technical drawing * Procedures to standardizing 3S activities * Analyzing and preparing shop layout of the workplace * Standardizing and sustaining checklists * Preparing and implementing tools and techniques to sustain 3S * Working with others * Reading and interpreting documents * Observing situations * Solving problems by applying 5S * Communication skills * Preparing labels, slogans, etc. * Gathering evidence by using different means * Using Kaizen board properly in accordance the procedure * Reporting activities and results using report formats |
| Resources Implication | Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices. |
| Methods of Assessment | Competence may be assessed through:   * Interview/Written Test * Observation/Demonstration with Oral Questioning |
| Context of Assessment | Competence may be assessed in the work place or in a simulated work place setting. |



**Acknowledgement**

We wish to extend thanks and appreciation to the many representatives of business, industry, academe and government agencies who donated their time and expertise to the review/streamlined of this occupational standard.

We would like also to express our appreciation to the Experts from Ministry of Agriculture and Natural Resources, Responsible and Innovative Land Administration Project, Benishangul-Gumuz National Regional State Bureau of Environmental Protection, Forest and Land Administration (BoEFLA), Benishangul-Gumuz National Regional State Bureau of TVET and Assosa ATVET College, Ministry of Education (MoE) - Federal TVET Agency and who made the development of this occupational standard possible.

This occupational standard was developed on December 2016 in Addis Ababa, Ethiopia.

**Comments:**

**Range of variables not found in in each unit of competency’s Performance Criteria are:**

**Under UC1:**

* Types of right
* OHS
* Tools & equipment
* Types & sources of information

**Under UC 2:**

* Rules & regulations
* OHS

**Under UC 3:**

* Quality requirement
* Information service
* Tools & equipment

**Under Uc5:**

* OHS requirements

**Under Uc 12:**

* Resources

**Under Uc 113:**

* Tools & equipment
* Types & sources of information