

ANIMAL HEALTH

LEVEL – I



CURRICULUM

Based on March, 2022 Version -1 Occupational
standard (OS)

April, 2022
Addis Ababa, Ethiopia

Preface

The reformed TVET-System is an outcome-based system. It utilizes the needs of the labor market and occupational requirements from the world of work as the benchmark and standard for TVET delivery. The requirements from the world of work are analyzed and documented – taking into account international benchmarking – as occupational standards (OS).

In the reformed TVET-System, curricula and curriculum development play an important role with regard to quality driven comparable TVET-Delivery. The Curricula help to facilitate the training process in a way, that trainees acquire the set of occupational competences (skills, knowledge and attitude) required at the working place and defined in the occupational standards (OS).

This curriculum has been developed by a group of professional experts from different federal and regional TVET colleges, Ministry of Labor and Skill, Industries and Institutes based on the occupational standard prepared for Animal health Level I.

The curriculum development process has been actively supported and facilitated by Ministry of Labor and Skills.

TVET-Program Design

1.1. TVET-Program Title: Animal Health Level I

1.2. TVET-Program Description

The Program is designed to develop the necessary knowledge, skills and attitude of the trainees to the standard required by the occupation. The contents of this program are in line with the occupational standard. The Trainees who successfully completed the Program will be qualified to work as animal health care worker with competencies elaborated in the respective OS. Graduates of the program will have the required qualification to work in the agricultural sector in the field of animal health.

The prime objective of this training program is to equip the Trainees with the identified competences specified in the OS. Graduates are therefore expected Identify and handle basic veterinary tools and equipment, apply 5S Procedures, Carry out cleaning for animal care work and waste management activities, Handle and Restrain Animals, Identify Sick Animals, Provide Basic Health Care for Animals, Apply Agricultural Extension Service, Implement Agribusiness Marketing and Apply Basics of Human Nutrition Practices in accordance with the performance criteria and evidence guide described in the OS.

1.3. TVET-Program Training Outcomes

The expected outputs of this program are the acquisition and implementation of the following units of competences:

| | |
|-------------------------|---|
| AGR ANH1 01 0322 | Identify and Handle Basic Veterinary Tools and Equipment |
| AGR ANH1 09 0322 | Apply 5S Procedures |
| AGR ANH1 02 0322 | Carry out Cleaning for Animal Care Work and Waste Management Activities |
| AGR ANH1 03 0322 | Handle and Restrain Animals |
| AGR ANH1 04 0322 | Identify Sick Animals |
| AGR ANH1 05 0322 | Provide Basic Health Care for Animals |
| AGR ANH1 06 0322 | Apply Agricultural Extension Service |
| AGR ANH1 07 0322 | Implement Agribusiness Marketing |
| AGR ANH1 08 0322 | Apply Basics of Human Nutrition Practices |

1.4. Duration of the TVET-Program

The Program will have duration of **392** hours including the on school/ Institution training and on-the-job practice or cooperative training time. Such cooperative training based on realities of the industry, nature of the occupation, location of the TVET institution, and other factors will be considered in the training delivery to ensure that trainees acquire practical and workplace experience.

| s.no | Unit competency | TVET Institution | | Cooperative training | Total hours | Remarks |
|------|---|------------------|-----------|----------------------|-------------|---------|
| | | training | | | | |
| | | Theory | Practical | | | |
| 1. | Identify and Handle Basic Veterinary Tools and Equipment | 18 | 33 | 9 | 60 | |
| 2. | Apply 5S Procedures | 8 | 10 | 6 | 24 | |
| 3. | Carry out Cleaning for Animal Care Work and Waste Management Activities | 18 | 30 | 12 | 60 | |
| 4. | Handle and Restrain Animals | 18 | 24 | - | 42 | |
| 5. | Identify Sick Animals | 14 | 20 | 6 | 40 | |
| 6. | Provide Basic Health Care for Animals | 18 | 20 | 10 | 48 | |
| 7. | Apply Agricultural Extension Service | 26 | - | 20 | 46 | |
| 8. | Implement Agribusiness Marketing | 16 | 10 | 10 | 36 | |
| 9. | Apply Basics of Human Nutrition Practices | 12 | 14 | 10 | 36 | |

1.5. Qualification Level and Certification

Based on the descriptors elaborated on the Ethiopian National TVET Qualification Framework (NTQF) the qualification of this specific TVET Program is Level I.

The trainee can exit after successfully completing the modules in one level and will be awarded the equivalent institutional certificate on the level completed. However, only institutional certificate of training accomplishment will be awarded.

1.6. Target Groups

Any citizen who meets the entry requirements under items 1.7 and capable of participating in the training activities is entitled to take part in the Program.

1.7 Entry Requirements

The prospective participants of this program are required to possess the requirements or directive of the Ministry of Labor and Skills.

1.8 Mode of Delivery

This TVET-Program is characterized as a formal Program on middle level technical skills. The mode of delivery is co-operative training. The time spent by the trainees in the real work place/ industry will give them enough exposure to the actual world of work and enable them to get hands-on experience.

The co-operative approach will be supported with school-based lecture-discussion, simulation and actual practice. These modalities will be utilized before the trainees are exposed to the industry environment.

Hence based on the nature of the occupation, location of the TVET institutions, and interest of the industry alternative mode of cooperative training such as apprenticeships, internship and traineeship will be employed. In addition, in the areas where industry is not sufficiently available the established production and service centers/learning factories in TVET institutions will be used as cooperative training places. The Training-Institution and identified companies have forged an agreement to co-operate with regard to the implementation of this program.

1.9. TVET-Program Structure

| Unit of Competence | Module Code & Title | | Training Outcomes | Duration (In Hours) | |
|-------------------------|---|-------------------|--|--|----|
| AGR ANH1 01 0322 | Identify and Handle Basic Veterinary Tools and Equipment | AGR ANH1 M01 0422 | Identifying and Handling Basic Veterinary Tools and Equipment | <ul style="list-style-type: none"> Identify, Prepare and use basic tools and equipment Undertake cleaning activities Handle and store basic tools and equipment | 60 |
| AGR ANH1 09 0322 | Apply 5S Procedures | AGR ANH1 M02 0422 | Applying 5S Procedures | <ul style="list-style-type: none"> Prepare for work Sort items Set all items in order Perform shine activities Standardize 5S Sustain 5S | 24 |
| AGR ANH1 02 0322 | Carry out Cleaning for Animal Care Work and Waste Management Activities | AGR ANH1 M03 0422 | Carrying out Cleaning for Animal Care Work and Waste Management Activities | <ul style="list-style-type: none"> Apply OHS procedures Cleaning animal premises and materials Routine animal care and cleaning activities Waste management activities | 60 |
| AGR ANH1 03 0322 | Handle and Restrain Animals | AGR ANH1 M04 0422 | Handling and Restrain Animals | <ul style="list-style-type: none"> Develop understanding of animal behavior perform capturing of animals carryout animal restraining activities | 42 |
| AGR ANH1 04 0322 | Identify Sick Animals | AGR ANH1 M05 0422 | Identifying Sick Animals | <ul style="list-style-type: none"> Develop Understanding of Normal Animal Health Indicators Identify signs and symptoms of sick Animals Isolate sick animals and report the problem | 40 |

| | | | | | |
|-------------------------|---|-------------------|--|--|----|
| AGR ANH1 05 0322 | Provide Basic Health Care for Animals | AGR ANH1 M06 0422 | Providing Basic Health Care for Animals | <ul style="list-style-type: none"> • Provide basic health care for sick animals • Provide care for pregnant Animals • Provide care for lactating animals • Provide care for new-born Animals | 48 |
| AGR ANH1 06 0322 | Apply Agricultural Extension Service | AGR ANH1 07 0422 | Applying Agricultural Extension Service | <ul style="list-style-type: none"> • plan and Prepare for work • Prepare surfaces • Apply finishing materials • Clean work area and maintain equipment | 46 |
| AGR ANH1 07 0322 | Implement Agribusiness Marketing | AGR ANH1 M08 0422 | Implementing Agribusiness Marketing | <ul style="list-style-type: none"> • Understand concept of agricultural marketing • Understand concepts of agribusiness • Identify marketing targets for Agricultural products • Implement marketing strategy • Establish contract farming • Apply Agricultural marketing services | 36 |
| AGR ANH1 08 0322 | Apply Basics of Human Nutrition Practices | AGR ANH1 09 0422 | Applying Basics of Human Nutrition Practices | <ul style="list-style-type: none"> • Identify Categories of agricultural foods items • Recognize malnutrition in the community • Identify the role of agriculture in nutrition • Demonstrate diversified Agricultural food production and consumption techniques • Perform proper handling and storage of agricultural food products • Document and report food production, consumption and difficulties | 36 |

*The time duration (Hours) indicated for the module should include all activities in and out of the TVET institution.

1.10 Institutional Assessment

Two types of evaluation will be used in determining the extent to which training outcomes are achieved. The specific training outcomes are stated in the modules. In assessing them, verifiable and observable indicators and standards shall be used.

The *formative assessment* is incorporated in the training modules and form part of the training process. Formative evaluation provides the trainee with feedback regarding success or failure in attaining training outcomes. It identifies the specific training errors that need to be corrected, and provides reinforcement for successful performance as well. For the teacher, formative evaluation provides information for making instruction and remedial work more effective.

Summative Evaluation the other form of evaluation is given when all the modules in the program have been accomplished. It determines the extent to which competence have been achieved. And, the result of this assessment decision shall be expressed in the term of institutional Assessment implementation guidelines..

Techniques or tools for obtaining information about trainees' achievement include oral or written test, demonstration and on-site observation.

1.11 TVET Teachers Profile

The teachers conducting this particular TVET Program are required to have above B Level and have satisfactory national competence assessment with practical experiences or equivalent qualifications.

| LEARNING MODULE 01 | |
|--|--|
| TVET-PROGRAMME TITLE: Animal Health Level I | |
| MODULE TITLE: Identifying and Handling Basic Veterinary Tools and Equipment | |
| MODULE CODE: <u>AGR ANH1 M01 0422</u> | |
| NOMINAL DURATION: <u>60</u> Hours | |
| <p>MODULE DESCRIPTION: This module covers the knowledge, skills and attitude required to identify and operate with basic tools and equipment. The module also requires the application of skills and knowledge to a specified range of tasks to clean and store basic veterinary tools and equipment. In addition, the competence requires an awareness of workplace safety and positive environmental practices associated with equipment operation.</p> | |
| <p>LEARNING OUTCOMES</p> <p>At the end of the module the trainee will be able to:</p> <p>LO1. Identify, Prepare and use basic tools and equipment</p> <p>LO2. Undertake cleaning activities</p> <p>LO3. Handle and store basic tools and equipment</p> | |
| <p>MODULE CONTENTS:</p> <p>LO1. Identify, Prepare and use basic tools and equipment</p> <ol style="list-style-type: none"> 1.1. Basic tools, equipment and machinery in animal health care and service 1.2. pre-operational checks of basic veterinary tools and equipment 1.3. Performing simulation trial to operate basic tools and equipment 1.4. Identify, segregate, and report unsafe or non-functional tools and equipment 1.5. Understanding of Occupational health and safety (OHS) 1.6. Work place hazards and Safe Work Procedures <p>LO2. Undertake cleaning activities</p> <ol style="list-style-type: none"> 2.1. Cleaning of tools and equipment 2.2. Reporting of problems or difficulties in the work place 2.3. Disposing of waste material <p>LO3. Handle and store basic tools and equipment</p> <ol style="list-style-type: none"> 3.1 Handling of cleaning materials 3.2 Safe handling and storing basic veterinary tools and equipment 3.3 Reporting work outcomes | |



LEARNING METHODS:

- Lecture and group Discussion
- Démonstration
- Simulation
- Field Visit

ASSESSMENT METHODS:

- Written test
- Oral questioning (Interview)
- Practical demonstration

Assessment Conditions

- Assessment will be conducted in each learning outcome and final assessment after finishing the module

ASSESSMENT CRITERIA:

LO1: Identify, Prepare and use basic tools and equipment

- Suitable PPE, Tools, and equipment are identified, selected, used, maintained, and stored following instructions and OHS requirements.
- The use of basic veterinary tools and equipment are well understood
- Routine pre-operational checks of tools and equipment are carried out to the manufacturer's specifications.
- A simulation trial is carried out on how to operate basic tools and equipment.
- Unsafe or non-functional tools and equipment are identified, segregated, and reported for repair or replacement.
- OHS hazards in the workplace are identified and reported to the supervisor.

LO2: Undertake cleaning activities

- Cleaning activity is undertaken in a safe and environmentally appropriate manner according to organizational guidelines.
- Problems or difficulties in completing work to the required standards or timelines are reported to the respective hierarchy.
- Waste material produced during cleaning activities is stored in a designated area according to supervisors' instructions.

LO 3: Handle and store basic tools and equipment

- Cleaning materials are stored or disposed of according to manufacturer's instructions
- Tools and equipment are maintained and stored according to manufacturers' specifications.
- Work outcomes are reported to supervisors.

Annex: Resource Requirements

| AGR ANH1 M01 0422 : Identifying and Handling Basic Veterinary Tools and Equipment | | | | |
|--|---|---|-----------------|--|
| Item No. | Category/Item | Description/ Specifications | Quantity | Recommended Ratio (Item: Trainee) |
| A. Learning Materials | | | | |
| 1. | TTLM and handouts | prepared by the National TVET center and the college trainers | 25 psc | 1:1 |
| 2 | Training videos | On telegram and you tube | | 1:1 |
| 3 | Reference Books | | | |
| 3.1 | Veterinary Instruments and Equipment | Teresa Sonsthagen, 2018, A Pocket Guide,4th Edition, 29 | 5 pcs | 1:5 |
| 3.2 | Veterinary Surgical Instruments: | College of Animal Welfare; An Illustrated Guide, Vet books, 2009 | 5 pcs | 1:5 |
| 3.3 | Veterinary-diagnostic/veterinary-chemistry-analyzer | http://www.ploydia.com | 5 pcs | 1:5 |
| 3.4 | veterinary-medical-equipment | https://www.shanghaiterrui.com | 5 pcs | 1:5 |
| 4 | Reference manuals | To be prepared by the trainer, manufacturers and industries | 5 pcs | 1:5 |
| 5 | written and graphical instructions, Bulletins, data sheet, diagrams or sketches | | 2 pcs | 1:13 |
| 6 | Journals/Publication/Magazines | | 5 pcs | 1:5 |
| 7 | Workplace guidelines/manuals | To be prepared by the trainer/college | 5 pcs | 1:5 |
| B. Learning Facilities and Infrastructure | | | | |
| 1 | Lecturing room | 56 m ² | | 1:25 |



| | | | | |
|--------------------------------|---|--|--------|-------------|
| 2 | Library | 1.7m ² /trainee | | 1:25 |
| 3 | Audio visual/ICT room | 64 m ² | | 1:25 |
| 4 | Laboratory room | 1.6 m ² /trainee | | 1:25 |
| 5 | Workshop | 1.6 m ² /trainee | | 1:25 |
| 6. | Open air veterinary clinic | | | 1:25 |
| C. Consumable Materials | | | | |
| 1. | Chemicals | <ul style="list-style-type: none"> • Detergent(house hold bleaching, soap) • Disinfectant (formalin, Ethyl alcohol, Isopropyl alcohol, Glutaraldehyde, H₂O₂, K₂MnO₄) <ul style="list-style-type: none"> ○ Iodine (povidone and tincture) ○ Savlone ○ sanitizers | | As required |
| 2 | Glove | Types Different (latex, arm length, leather, rubber glove) | | 1:1/2:1 |
| D. Tools and Equipment | | | | |
| 1 | PPE | Boots, Hat/hard hat, Overalls, Gown, Apron, Protective eyewear, Respirator or face mask, Sun, protection, e.g., sun hat, sunscreen | 25 pcs | 1:1 |
| 2 | Laboratory tools and equipment | Microscope, Autoclave, Glass wares, Water Centrifuge, Incubator, Hot oven, biosafety | 2 pcs | 1:13 |
| 3 | clinic tools and equipment | Stethoscope, Thermometer, Syringe, Needles of different size and type, Sample collection equipment, Burdizzo and Emasculator, Girth meter, Trocar and cannula, Scissor and forceps, Surgical suture material, Surgical needle holder, Hoof, pick and horn trimmer, Different anima restraining materials. | 2 pcs | 1:13 |
| 4 | Animal restraining tools and equipment | Rope, halter, collar, catch pole, nose twitch, nose ring, crash, cradle, sedative and tranquilizer chemicals, blanket | 3 pcs | 1:8 each |
| 5 | Artificial insemination tools and equipment | Liquid nitrogen jar and its constituents, Thermometer, boiler, AI sheath, AI gun, scissor, towel | 3 pcs | 1:8 each |

| LEARNING MODULE 02 | |
|---|--|
| TVET-PROGRAMME TITLE: Animal Health Level I | |
| MODULE TITLE: Applying 5S Procedures | |
| MODULE CODE: AGR ANH1 M02 0422 | |
| NOMINAL DURATION: 24 Hours | |
| MODULE DESCRIPTION : This module covers the knowledge, skills and attitude required to apply 5S techniques 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. | |
| <p>LEARNING OUTCOMES</p> <p>At the end of the module the trainee will be able to:</p> <p>LO1. Prepare for work</p> <p>LO2. Sort items.</p> <p>LO3. Set all items in order.</p> <p>LO4. Perform shine activities.</p> <p>LO5. Standardize 5S.</p> <p>LO6. Sustain 5S.</p> | |
| <p>MODULE CONTENTS:</p> <p>LO1. Prepare for Work</p> <ol style="list-style-type: none"> 1.1. Using work instructions 1.2. Reading and interpreting job specifications 1.3. Observing OHS requirements 1.4. Preparing and using equipment 1.5. Identifying and checking safety equipment and tools 1.6. Preparing and using kaizen Board <p>LO2. Sort Items</p> <ol style="list-style-type: none"> 2.1 Preparing plan 2.2 Performing cleaning activities 2.3 Identifying all items in the workplace <ol style="list-style-type: none"> 2.3.1. Tools 2.3.2. Jigs/Fixtures 2.3.3. Materials/components | |

2.3.4. Machine and equipment

2.3.5. Manuals

2.3.6. Documents

2.4 Listing necessary and unnecessary items

2.5 Using Red tag strategy

2.6 Evaluating and placing unnecessary items

2.7 Recording and quantifying necessary items

2.8 Reporting performance results

2.9 Checking the necessary items

LO3. Set All Items in Order

3.1 Preparing plan.

3.2 Performing cleaning activities

3.3 Deciding location/layout, storage and indication methods

3.4 Preparing and using necessary tools and equipment.

3.5 Placing items in their assigned locations

3.6 Returning the items after use

3.7 Reporting performance results

3.8 Checking each item regularly

LO4. Perform Shine Activities.

4.1 Preparing plan

4.2 Preparing and using necessary tools and equipment

4.3 Implementing shine activity

4.4 Reporting performance results.

4.5. Conducting regular shining activities.

LO5. Standardize.

5.1. Preparing and using plan.

5.2. Preparing and implementing tools and techniques

5.3. Following checklists and report

5.4. Keeping workplace

5.5. Avoiding the problems

LO6. Sustain.

6.1. Preparing and following plan

6.2. Discussing, preparing and implementing tools and techniques

6.3. Inspecting the workplace specified standard



- 6.4. Cleaning up workplace
- 6.5. Identifying the situations and actions specified
- 6.6. Recommending improvements
- 6.7. Following checklists
- 6.8. Avoiding problems by sustaining activities.

LEARNING METHODS:

- Lecture and Discussion
- Practical demonstration
- Presentation
- Audio visual

ASSESSMENT METHODS:

- Written test
- Group/individual assignment with presentation
- Practical assessment with Oral questioning



ASSESSMENT CRITERIA:

LO.1 Prepare for work

- The work instructions are used to determine job requirements, including method, material and equipment
- Job specifications are read and interpreted following working manual.
- OHS requirements, including dust and fume collection, breathing apparatus and eye and ear personal protection needs are observed throughout the work.
- Tools and equipment are prepared and used to implement 5S.
- Safety equipment and tools are identified and checked for safe and effective operation.
- Kaizen Board (Visual Management Board) is prepared and used in harmony with different workplace contexts.

LO.2 Sort items

- Plan is prepared to implement sorting activities.
- Cleaning activities are performed.
- All items in the workplace are identified following the appropriate procedures.
- Necessary and unnecessary items are listed using the appropriate format.
- Red tag strategy is used for unnecessary items.
- Unnecessary items are evaluated and placed in an appropriate place other than the workplace.
- Necessary items are recorded and quantified using appropriate format.
- Performance results are reported using appropriate formats.
- Necessary items are regularly checked in the workplace.

LO.3 Set all items in order

- Plan is prepared to implement set in order activities.
- General cleaning activities are performed.
- Location/Layout, storage and indication methods for items are decided.
- Necessary tools and equipment are prepared and used for setting in order activities.
- Items are placed in their assigned locations.
- After use, the items are immediately returned to their assigned locations.
- Performance results are reported using appropriate formats.
- Each item is regularly checked in its assigned location and order.

LO.4 Perform shine activities

- Plan is prepared to implement shine activities.
- Necessary tools and equipment are prepared and used for shinning activities.
- Shine activity is implemented using appropriate procedures.
- Performance results are reported using appropriate formats.
- Regular shining activities are conducted.

LO5. Standardize 5S

- Plan is prepared and used to standardize 5S activities.
- Tools and techniques to standardize 5S are prepared and implemented based on relevant procedures.
- Checklists are followed for standardize activities and reported to relevant personnel.
- The workplace is kept to the specified standard.
- Problems are avoided by standardizing activities.

LO6. Sustain 5S

- Plan is prepared and followed to sustain 5S activities.
- Tools and techniques to sustain 5S are discussed, prepared and implemented based on relevant procedures.
- Workplace is inspected regularly for compliance to specified standard and sustainability of 5S techniques.
- Workplace is cleaned up after completion of job and before commencing next job or end of shift.
- Situations are identified where compliance to standards is unlikely and actions specified in procedures are taken.
- Improvements are recommended to lift the level of compliance in the workplace.
- Checklists are followed to sustain activities and report to relevant personnel.
- Problems are avoided by sustaining activities.

Annex: Resource Requirements

| AGR ANH1 M02 0422: Applying 5S Procedures | | | | |
|---|--------------------------------|---|-------------|--|
| Item No. | Category/Item | Description/ Specifications | Qty. | Recommended Ratio (Item: Trainee) |
| A. Learning Materials(Disability inclusive learning guide) | | | | |
| 1. | TTLM | prepared by the trainer | 25 pcs | 1:1 |
| 2. | Reference Books | | | |
| 2.1 | Gemba KAIZEN | 2nd Edition Masaaki Imai | 5 pcs | 1:5 |
| 3. | Journals/Publication/Magazines | Published/unpublished | 2 pcs | 1:13 |
| B. Learning Facilities and Infrastructure | | | | |
| 1. | Lecture room | 7m* 8 m | | 1:25 |
| 2. | Workshop | 4m*25 m | | 1:25 |
| 3. | Store | 20 m*20 m | | 1:25 |
| 4. | Library | 1.7 m ² area Needed Per Trainee | | 1:25 |
| 5. | Instructional Audio video | Library/classroom location | | 1:1 |
| 6. | Visual training Media | LCD, Laptops | 1 pcs | 1:25 |
| 7. | Teaching boards | White board ,Flip chart ,Smart board | 1 pcs | 1:25 |
| 8. | Arm chair | 55 Cm *74 Cm *100Cm | 25 pcs | 1:1 |
| 9. | Notice board | 120*100 Cm | 1pcs | 1:25 |
| 10. | White board | 240 Cm *120 Cm | 1 pcs | 1:25 |
| Consumable material | | | | |
| 1. | Detergent | Liquid | 10 ltr | 1:2 |
| 2. | Sweeper | Sponge | 5 pcs | 1:5 |
| Tools and equipment | | | | |
| 1. | 5s Slogans | Per workshop | 5 pcs | 1:5 |
| 2. | 5s Map | Per workshop | 5 pcs | 1:5 |
| 3. | Shelves | Per workshop | 5 pcs | 1:5 |
| 4. | Kaizen Board | Per workshop | 5 pcs | 1:25 |

| LEARNING MODULE 03 | |
|--|--|
| TVET-PROGRAMME TITLE: Animal Health Level I | |
| MODULE TITLE: Carrying out Cleaning for Animal Care Work and Waste Management Activities | |
| MODULE CODE: <u>AGR ANH1 M03 0422</u> | |
| NOMINAL DURATION: 60 Hours | |
| <p>MODULE DESCRIPTION: This module covers knowledge, skills and attitude required to clean animal premises, perform animal care cleaning activities, and implement waste management. It requires the ability to identify hazards, follow OHS procedures, clean animal premises, veterinary clinic and laboratories, collect and segregate wastes, prioritize waste treatment and disposal options up on completion of cleaning activities.</p> | |
| <p>LEARNING OUTCOMES</p> <p>At the end of the module the trainee will be able to:</p> <p>LO1. Apply OHS procedures</p> <p>LO2. Cleaning animal premises and materials</p> <p>LO3. Routine animal care and cleaning activities</p> <p>LO4. Waste management activities</p> | |
| <p>MODULE CONTENTS:</p> <p>LO1. Apply OHS procedures</p> <ol style="list-style-type: none"> 1.1. The concept of OHS and types of hazard 1.2. work-related hazards 1.3. Reporting Risks at work place 1.4. Handling and using PPE 1.5. Implementing Safe work practices and follow strict OHS procedures <p>LO2. Cleaning animal premises and materials</p> <ol style="list-style-type: none"> 2.1. Preparing relevant equipment and chemicals for disinfection and sterilization 2.2. Following Legislative and regulation on chemical usage 2.3. Cleaning, disinfecting and sterilizing working areas and premises 2.4. Preparing and monitoring foot baths and wheel bath 2.5. Cleaning and disinfection of animal houses, feeding and watering trough 2.6. Safe techniques in loading and unloading material <p>LO3. Routine animal care and cleaning activities</p> | |



- 3.1. Animal body grooming
- 3.2. Hoof pecking, trimming, debeaking and shearing
- 3.3. Animal feed inspection

LO4. Waste management activities

- 4.1. Selecting and using PPE
- 4.2. Identifying and classifying wastes
- 4.3. Collection, storage and removal of wastes
- 4.4. Waste segregation and treatment before elimination
- 4.5. Disposal methods of wastes

LEARNING METHODS:

- Lecture and Discussion
- Practical démonstration
- Trainées Présentation
- Audio visual

ASSESSMENT METHODS:

- Written test
- Group/individual assignment with presentation
- Practical assessment with Oral questioning

ASSESSMENT CRITERIA:

LO1. Apply OHS procedures

- Understand the concept of OHS and types of hazard
- Identify work-related hazards and follow strict OHS procedures.
- Risks related to heat, electricity, detergents and chemical agents are identified, recognized and reported to designated personnel according to organizational policies and procedures.
- Suitable PPE clothing and Equipment are selected, checked, used, maintained and stored in accordance with organizational policies and procedures.
- Safe work practices and OHS procedures are implemented in accordance with safety precautions of the organization and specifications.

LO2. Cleaning animal premises and materials

- Relevant equipment and chemicals for disinfection and sterilization animal health care work area and animal premises are prepared according to organizational guideline.
- Legislative and regulation on chemical usage are followed.
- Animal health care Working areas and premises are cleaned, disinfected and sterilized following organizational procedures.
- Foot baths and wheel bathes; are prepared and monitored at the gates of animal farms and entry of animal premises, following organizational guidelines.
- Animal houses, Feeding and watering trough are cleaned and disinfected.
- Correct manual handling techniques are used when loading and unloading material to minimise damage to self and the material according to the organisational guidelines.

LO3. Routine animal care and cleaning activities

- Animal body grooming is performed when required following standard procedures.
- Hoof pecking and trimming in equine, ruminants and camel, debeaking in chicken, wool shearing for sheep are performed following standard procedures.
- Animal feed are inspected and maintained free from gross contamination, mould, sharp and indigestible objects.

LO4. Waste management activities

- Appropriate PPE are selected and used in accordance with the institutional regulation.
- General wastes are identified and classified in groups based on waste management principles
- Collection, storage and removal of different groups of wastes are carried out

according to the organizational guideline and the local area environmental policy.

- Wastes that require prior treatment before removal/elimination are identified and dealt accordingly following the organizational guidelines.
- Wastes are disposed of in different ways depending on the groups of waste and national guidelines.



Annex: Resource Requirements

| AGR ANH1 M03 0422: Carrying out Cleaning for Animal Care Work and Waste Management Activities | | | | |
|--|--|---|-----------------|--|
| Item No. | Category/Item | Description/ Specifications | Quantity | Recommended Ratio (Item: Trainee) |
| A. Learning Materials | | | | |
| 1 | TTLM and hand outs | prepared by the trainer | 25 pcs | 1: 1 |
| 2 | Reference Books | Reference books related to cleaning animal care activities | 5 pcs | 1: 5 |
| 3 | Reference and technical manuals | Prepared by trainer, government /organization | 5 pcs | 1: 5 |
| 4 | written graphical and diagrams or sketches | Prepared by trainer, government /organization | 5 pcs | 1: 5 |
| 5 | Journals/Publication/Magazines | Online Published paper related with cleaning animal care activities | | 1:5 |
| B. Learning Facilities and infrastructure | | | | |
| 1. | Lecture Room | | | 1:25 |
| 2. | Virtual library (LCD project, computer, software and CD) | | | 1:25 |
| 3. | Moderate laboratory | | | 1:25 |
| 4 | Well-equipped Work station (clinic) | | | 1:25 |
| 5 | Animal farms | Poultry, dairy, beef, shoat and swine farm | 1 each | 1:25 |
| C. Consumable Materials | | | | |
| 1. | Detergents and soap | House hold bleach | 0.5kg | 1:3 |
| | | Soap | 1pack | |
| 2 | Disinfectants and antiseptics | Ethanol | 2 ltr | As required |
| | | Formalin | 2 ltr | |
| | | Glutaraldehyde Ethyl alcohol | 2 ltr | |
| | | Isopropyl alcohol Povedine iodine | 1 ltr | |
| | | Chlorohexidine Methanol | 2 ltr | |
| 3 | | Gauze | 1 roll | As required |
| | | Cotton | 1 roll | |
| | | disposable glove | 3 pack | |



| D. | Tools and Equipment | | | |
|----|-------------------------------|--|-------------|------|
| 1. | Personal protective equipment | Overalls, Boots, helmet, gloves, protective eyewear, apron and respirator or face mask | 25 pcs each | 1:1 |
| 2 | Cleaning tool | Brooms, rakes, mops, buckets, dust bin , towel, brush and disposal pits, boiler | 2pcs each | 1:13 |
| 3 | Crush | Bovine crush Kick proof equine crush | 1 No. | 1:25 |
| 5 | Mouth gag and collar | Bovine mouth gag canine moth gag/muzzle | 1 No. | 1:5 |
| 6 | Material for animal care | Hoof trimmer | 2 pcs | 1:13 |
| | | Debeaker | 2 pcs | 1:13 |
| | | Scissors/ shearer | 2 pcs | 1:13 |
| | | Hoof knife | 3 pcs | 1:8 |
| | | Grooming Brush | 3 pcs | 1:8 |

| LEARNING MODULE 04 | |
|--|--|
| TVET-PROGRAMME TITLE: Animal Health Level I | |
| MODULE TITLE: Handling and Restraining Animals | |
| MODULE CODE: <u>AGR ANH1 M04 0422</u> | |
| NOMINAL DURATION: 42 Hours | |
| MODULE DESCRIPTION: This Module covers knowledge, skills and attitude required to undertake capturing and restraining animals for the purpose of diagnosis, treatment, transportation and use as draft power. It also covers understanding normal behaviour and skill to handle animals following OHS guide lines and procedures. | |
| LEARNING OUTCOMES At the end of the module the trainee will be able to: LO1. Develop understanding of animal behavior LO2. Perform capturing of animals LO3. Carryout animal restraining activities | |
| MODULE CONTENTS: LO.1 Develop understanding of animal behavior 1.1. Normal behavioral expression of different animal species 1.2. Comparing normal and abnormal animal traits 1.3. Defensive reaction of animals in response to capture and restraining 1.4. Hazards associated with restraining of animals LO.2 Perform capturing of animals 2.1. Animal capturing materials and equipment 2.2. OHS procedures in animal capturing 2.3. Safe and humanely capturing of animals LO.3 Carryout animal restraining activities 3.1. Selecting and preparing restraining materials and equipment 3.2. Applying physical restraining techniques 3.3. Conducting chemical and verbal restraining 3.4. Safety measures and animal welfare in restraining of animals | |
| LEARNING METHODS: | |
| <ul style="list-style-type: none"> • Lecture and Discussion • Démonstration • Field visits | |



- Simulation
- Audio Visual methods

ASSESSMENT METHODS:

- Written test
- Oral questioning
- Individual and group assignments
- Practical demonstration

ASSESSMENT CRITERIA:

LO.1 Develop understanding of animal behavior

- Behavioral expression of different animal species are observed and interpreted.
- Normal and abnormal animal traits are compared.
- Defensive reaction of animals in response to capture and restraining is understood.
- Risks associated with handling and restraining of animal are identified and safety procedures are followed

LO.2 Perform capturing of animals

- Appropriate capturing materials and equipment are selected and prepared for use.
- OHS and emergency procedures are followed.
- Animals are captured in a safe and humane manner following standard guidelines

LO.3 Carryout animal restraining activities

- Appropriate restraining materials and equipment are selected and prepared for use.
- Appropriate restraining techniques are performed according to the species
- Physical restraining techniques are conducted carefully in a way free of stress or injury.
- Chemical restraints are used as restraints as of their appropriateness.
- Verbal restraints are used where required
- Measures are taken based on the capturing and restraining objectives of the enterprise.
- Protocols and procedures for capture and restrain including animal welfare requirements are followed under supervision.



Annex: Resource Requirements

| AGR ANH1 M04 0422 Handling and Restraining Animals | | | | | |
|---|--|---|--|-----------------|--|
| Item No. | Category/Item | | Description/ Specifications | Quantity | Recommended Ratio (Item: Trainee) |
| A. Learning Materials | | | | | |
| 1. | TTLM | | prepared by the trainer | 25 pcs | 1:1 |
| 2. | Reference Books | | | | |
| 2.1 | Animal Restraint for Veterinary Professionals | | Sheldon. C. <i>et al.</i> , (2022): 2 nd ed | 5 pcs | 1:5 |
| 2.2 | Handling and Restraint of Animals: A Comprehensive Guide | | Chastain. A.U., Vellios, Lynn. C.B., 2017 | 5 pcs | 1:5 |
| 2.3 | Safe Handling and Restraint of Animals | | Chapman. J. (2017 | 5 pcs | 1:5 |
| 2.4 | Animal Handling and Physical Restraint | | online | 25 | 1:1 |
| 3. | Work place Guideline and manuals | | Prepared by trainers/Colleges | 5 | 1:5 |
| 4 | Audio Visual | | CD/VCD/LCD | 1 | 1:25 |
| 4. | Journals/Publication/Magazine | | International or national veterinary journals/Online/ | 5 | 1:5 |
| B. Learning facilities and infrastructure | | | | | |
| 1. | Lecture room | 7m*8m | | | 1:25 |
| 2. | Well-equipped Computer Room | 7m*8m | | | 1:25 |
| 3. | Farm | Shoat farm, dairy and beef farm, poultry farm | | | 1:25 |
| 4 | Open air clinic | | | | 1:25 |
| | | | | | |



| C. Consumable Materials | | | | |
|--------------------------------|---|-------------------------------------|----------------|-------------|
| 1. | Stationary materials | Pens, paper, pencils/ Marker, Chalk | 2Packs/1 Gross | As required |
| 2 | Cleaning and disinfecting chemicals | House hold bleach | 1kg | --- |
| | | Ethanol alcohol | 2 ltr | 1:13 |
| | | Povidone and tincture iodine | 2 ltr | 1:13 |
| | | Savlon | 2 ltr | 1:13 |
| | | Soaps | 1 pack | 1:25 |
| | | Xylazine | 2 vial each | |
| | | Acepromazine | | |
| D. Tools and Equipment | | | | |
| 1. | Ropes | Synthetic/ organic rope | 5 pcs | 1:5 |
| 2 | Crush | Stainless steel | 1 pcs | 1:25 |
| 3 | Pig holder | Wood/stainless steel | 2 pcs | 1:13 |
| 4 | Bull holder | stainless steel | 2 pcs | 1:13 |
| 5 | Chain and mesh wire | stainless steel | 2 pcs | 1:13 |
| 6 | Pole | Wood/metal | 1 pcs | 1:25 |
| 7 | Poultry cage | Plastic/wire/wood | 2 pcs | 1:13 |
| 8 | Anesthetic gun | Metal | 1 pcs | 1:25 |
| 9 | Personal protective equipment | Boots | 25 pair | 1:1 |
| | | hats/hard hat | 25 pcs | 1:1 |
| | | coveralls | 25 pcs | 1:1 |
| | | Gloves in packet | 1 pack | 4:1 |
| 10 | Document camera, Audio video input, computer, network connectivity, LCD and amplifier | | 1 each | 1:25 |

| LEARNING MODULE 05 | |
|--|--|
| TVET-PROGRAMME TITLE: Animal Health Level – I | |
| MODULE TITLE: Identifying Sick Animals | |
| MODULE CODE: AGR ANH1 M05 0422 | |
| NOMINAL DURATION: 40 Hours | |
| <p>MODULE DESCRIPTION: This module covers the knowledge, skills and attitude required to develop understanding of Normal Animal Health Indicators which can help in the identification and record of signs and symptoms of sick animals. It also covers differentiating between health and sick animals using basic diseases symptoms and behavioural changes that help for health management and keeping them in isolation pen with the corresponding holder.</p> | |
| <p>LEARNING OUTCOMES</p> <p>At the end of the module the trainee will be able to:</p> <p>LO1. Develop Understanding of Normal Animal Health Indicators</p> <p>LO2. Identify signs and symptoms of sick Animals</p> <p>LO3. Isolate sick animals and report the problem</p> | |
| <p>MODULE CONTENTS:</p> <p>LO1. Develop Understanding of Normal Animal Health Indicators</p> <ol style="list-style-type: none"> 1.1. Identifying normal physical condition and natural behavioral 1.2. Normal feeding and drinking behavior of animals 1.3. Characteristics of normal secretion and excretion <p>LO2. Identifying signs and symptoms of sick Animals</p> <ol style="list-style-type: none"> 2.1 Identifying changes to physical condition 2.2 Abnormal feeding and drinking behaviour 2.3 Identify signs and symptoms of sick animals <p>LO3. Isolate sick animals and report the problem</p> <ol style="list-style-type: none"> 3.1 Isolating sick/abnormal animals 3.2 Recording and reporting health condition and problems | |
| <p>LEARNING METHODS:</p> <ul style="list-style-type: none"> • Lecture and Discussion • Practical Démonstration • Simulation | |



- Audio Visual

ASSESSMENT METHODS:

- Written test
- Practical Demonstration with Oral Questioning
- Individual and group assignment

ASSESSMENT CRITERIA:

LO.1. Develop Understanding of Normal Animal Health Indicators

- Physical appearance, body conformation, and natural behavioural expression of animals are identified.
- Normal feed intake and drinking behaviour of animals are identified.
- Identify change in colour, volume, frequency and consistence of secretion and excretion from natural body orifice.

LO.2. Identify signs and symptoms of sick Animals

- Changes to physical appearance, abnormal feeding and drinking behaviour are identified following standard OHS procedures.
- Signs and symptoms of sick animals indicting the presence of disease, injury, compromised health or distress in animals are identified.

LO.3. Isolate sick animals and report the problem

- Sick/abnormal animals are isolated following standard OHS procedures and in accordance with organizational rules.
- Information related to the health condition and identified problem of animal recorded and reported promptly to the immediate supervisor.



Resource requirements (annex)

| AGR ANH1 M05 0422 Identifying Sick Animals | | | | |
|---|--|--|----------|-----------------------------------|
| Item No. | Category/Item | Description/ Specifications | Quantity | Recommended Ratio (Item: Trainee) |
| A. Learning Materials | | | | |
| 1. | TTLM | Prepared by the trainer | 25 pcs | 1:1 |
| 2 | Reference Books | | | |
| 2.1 | Text book of veterinary physiology | J.G. Cunningham, 2008 | 5 pcs | 1:5 |
| 2.2 | Anatomy and physiology of farm animals. | R. D. Frandson, W. Lee Wilke and A.D. Falls., 2009; 7 th ed. | 5 pcs | 1:5 |
| 2.3 | Essentials of animal physiology. | S.C. Rastogi. NAIL publishers. | 5 pcs | 1:5 |
| 2.4 | The Duke's Veterinary physiology. | Duke.(optional) | 5 pcs | 1:5 |
| 2.5 | Introduction to animal physiology. | Ian Key. Bioscience publishers Ltd. | 5 pcs | 1:5 |
| 2.6 | Veterinary Gross Anatomy; General Anatomy and Carnivore Anatomy. | T. F. Fletcher and C. E. Clarkso, Lecture Notes. | 5 pcs | 1:5 |
| 2. | Reference manuals | <ul style="list-style-type: none"> • ILRI manuals and researches, • EVA journals/ Magazines • International or national journals • Animal Health Institute manual • NVI manual and journals | 5 pcs | 1:5 |
| 3 | Written and graphical illustration | <ul style="list-style-type: none"> • To be prepared by the trainer or organization | 5 pcs | 1:5 |
| B. Learning Facilities and infrastructure | | | | |



| | | | | |
|--------------------------------|---|--|-------------|------|
| 1. | Well-equipped lecture room (with tables, chairs, White board) | 7m * 8m | | 1:25 |
| 2. | Virtual library with multimedia equipment (LCD, project, Television, software and CD) | 1.7 m ² /trainee | | 1:25 |
| 3. | Open air clinic | | | 1:25 |
| 4. | Anatomic models | Cattle, sheep, pig, dog and cat model | 5 pcs | 1:5 |
| 5. | Laboratory room | Concrete block (concrete block 169m ²) | 5 pcs | 1:5 |
| 6. | Well-equipped Computer Room | Concrete block (concrete block 100m ²) | 5 pcs | 1:5 |
| C. Consumable Materials | | | | |
| 1. | Cleaning and disinfecting chemicals | <ul style="list-style-type: none"> • Ethanol alcohol • Isopropyl alcohol • Formaline, • Glutaraldehyde • Iodophore • Potassium iodide • Logol's iodine • Hydrogen peroxide | 5 ltr each | 1:5 |
| 2. | Gauze | Medical grade sterile cotton gauze | 3 roll | 1:8 |
| 3. | Surgical and latex glove | Sterile and packed glove | 2 pack | 1:13 |
| 4. | Cotton | | 5 roll | 1:5 |
| D. Tools and Equipment | | | | |
| 1. | Personal protecting equipment | Boots, hats/hard hat, overalls, protective eyewear, hearing protections, respirator or face mask, sun protection (sun hat, sun screen), and leather glove. | 25 pcs each | 1:1 |
| 2. | Restraining material | Crush, rope, chain, nose ring, Elizabeth collar, bull holder, poultry cage and etc. | 5 pcs | 1:5 |
| 3. | Thermometer | | 5 pcs | 1:5 |
| 4. | Stethoscope | | 5 pcs | 1:5 |
| 5. | Stomach tube | | 2 pcs | 1:13 |



| | | | | |
|----|-----------------------|--|-------|------|
| 6. | Hammer and pleximeter | | 3 pcs | 1:8 |
| 7. | Tooth rasping | | 3 pcs | 1:8 |
| 8. | Mouth gauge | | 2 pcs | 1:13 |

LEARNING MODULE 06

TVET-PROGRAMME TITLE: Animal Health Level I

MODULE TITLE: **Providing Basic Health Care for Animal**

MODULE CODE: **AGR ANH1 M06 0422**

NOMINAL DURATION: **.48** Hours

MODULE DESCRIPTION: This module covers the knowledge, skills and attitude required to provide care service for sick, pregnant, lactating and anew-born animals. It requires a regular follow up and identify sign of ill health, sign of approaching parturition , assess the condition of new-born and perform resuscitation activity, disinfection of navel, feeding of colostrum and care for new-born animals.

LEARNING OUTCOMES

At the end of the module the trainee will be able to:

- LO1.** Provide basic health care for sick animals
- LO2.** Provide care for pregnant Animal
- LO3.** Provide care for lactating animals
- LO4.** Provide care for new-born Animals

MODULE CONTENTS:

LO1. Provide basic health care for sick animals

- 1.1. Providing Basic and Suitable accommodation
- 1.2. Accessing essential feed and water
- 1.3. Maintaining hygiene of sick animals

LO2. Provide care for pregnant Animal

- 2.1 Hazards associated with antenatal care
- 2.2 Maintaining clean and safe environment
- 2.3 Providing nutrition and supplementary feed
- 2.4 Observing the condition and health status of pregnant animals
- 2.5 Identifying Signs of approaching birth
- 2.6 Preparing delivery equipment, resources and materials
- 2.7 Use breeding records

LO3. Provide care for lactating animals

- 3.3 Monitoring post-delivery health, bonding of dam and new-born
- 3.4 Providing clean and comfortable area for lactating animals
- 3.5 Providing appropriate food and clean water
- 3.6 Carrying out hygienic milking



3.7 Observing, recording and reporting health status of lactating animals

LO4. Provide care for new-born Animals

- 4.1. OHS procedures during postnatal care
- 4.2 Resuscitation of new-born animals
- 4.3. Performing disinfection of navel
- 4.4. Collecting Colostrum and fed for new born
- 4.5. Regular checking of new-born on colostrum feeding
- 4.6. Providing clean, safe and secure housing environment
- 4.7. Preventing hypothermia
- 4.8. Monitoring relationship between mother and young
- 4.9. Maintaining and monitoring feeding, watering and shelter area
- 4.10. Identifying, recording and reporting health and feeding problems

LEARNING METHODS:

- Lecture and Discussion
- Practical démonstration
- Simulation
- Farm visit

ASSESSMENT METHODS:

- Written test
- Interview /Oral question/
- Practical demonstration
- Case study/group work/assignment

ASSESSMENT CRITERIA:

LO.1. Provide basic health care for sick animals

- Basic and Suitable accommodation is provided for sick animals
- Sick animals are accessed for essential feed and water based on the recommendation duty of veterinarian.
- Sick animals and their accommodations are maintained hygienic to prevent aggravation of injury/heath problem

LO.2. Provide care for pregnant Animal

- Hazards associated with antenatal care provision are identified and reported to supervisors.
- A clean, safe and secure environment/ separate shelter is maintained for pregnant animals to give birth in severe weather conditions according to organizational guideline and as directed by the supervisor
- Animal records are checked and the stage of gestation is confirmed where possible.
- Adequate nutrition and supplementary feed is provided to pregnant animals as instructed, and recorded accordingly
- The condition and health status of pregnant animals is observed and animals experiencing any parturition abnormality are recorded and reported to the supervisor
- Signs of approaching birth in animals are identified.
- Birthing equipment, resources and materials are checked and prepared for use.

LO.3. Provide care for lactating animals

- Post-birthing health and bonding of dam and new-born are monitored and any abnormality reported to the supervisor
- Clean and comfortable area is provided for lactating animals as directed by the supervisor.
- Appropriate and sufficient food and clean water are provided for lactating animal as instructed
- Milking is carried out in a clean manner following the organizational procedure to minimize contamination and reduce incidence of mastitis
- The condition and health status of lactating animals are observed and any abnormalities are recorded and reported to the supervisor

LO.4. Provide care for new-born Animals

- OHS procedures associated with postnatal care provision are followed.
- New-born resuscitation is carried out as required and according to the organizational guideline under direct supervision.

- Disinfection of navel is performed using appropriate disinfectants according to the organizational guideline and protocol under direct supervision.
- Colostrum is collected and fed to the new born within the appropriate time period, as directed by the supervisor and according to the organizational guideline.
- New-born animals are checked regularly after administration of colostrum and colostrum feeds repeated as required
- Clean, safe and secure housing environment is provided according to the enterprise guideline.
- Prevention from hypothermia by maintaining an appropriately warm environmental temperature in new born care areas is carried out.
- Relationship between mother and young is monitored where appropriate and strategies are consulted with supervisor to address any problems.
- Feeding, water and shelter areas are maintained and monitored for correct operation, cleanliness and hygiene
- Routine health and feeding problems, including digestive upsets and infections, are identified, recorded and reported to the vet



Annex: Resource Requirements

| AGR ANH1 M06 0422: Providing Basic Health Care for Animal | | | | |
|---|---|--|----------|-----------------------------------|
| Item No. | Category/Item | Description/ Specifications | Quantity | Recommended Ratio (Item: Trainee) |
| A. Learning Materials | | | | |
| 1. | TTLM | TTLM prepared by the trainer | 25 pcs | 1:1 |
| 2. | Reference Books | | | |
| 2.1 | Advanced Monitoring and procedures for small animal Emergency and critical care | Creedon and Davis 2012 | 5 pcs | 1:5 |
| 2.2 | Care and management of pregnant cattle | Siddartha Reddy, 2020 | 5 pcs | 1:5 |
| 3 | Journals/Publication/Magazines | | | 1:5 |
| 3.1 | Feeding and Managing Baby Calves from Birth to 3 Months of Age | Amaral-Phillips <i>et al.</i> 2015 | 5 pcs | 1:5 |
| 3.2 | Animal nutrition and product quality laboratory manual. ICARDA, Aleppo, Syria. | Zaklouta, M., Hilali, M., Nefzaoui, A. and Haylani, M., 2011 | 5 pcs | 1:5 |
| 3.3 | livestock production : recent trends future prospects | Thorntons, 2010 | 5 pcs | 1:5 |
| 3.4 | Management to decrease Neonatal calf loss in dairy herds | Stockler, 2021 | 5 pcs | 1:5 |
| B. Learning Facilities and Infrastructure | | | | |
| 1. | Class room | 56m ² | | 1:25 |
| 2. | Veterinary clinic | | | 1:25 |
| 3. | Animal Shelter/housing | | | 1:25 |
| 4 | Isolation room | | | As required |
| | Animal farm | With separated partition (eg. for | | 1:25 |



| | | | | |
|---|------------------------------------|---|---------|-------------|
| | | newborn, lactating, pregnant, bull) | | |
| 4 | Anatomical and embryological model | For different species | | As required |
| 5 | Audiovisual room | Contain necessary materials and equipment | 1 | 1:25 |
| 6 | Library | 1.7m ² /trainee | 1 | 1:25 |
| C. Consumable Materials | | | | |
| 1. | Chemical | | 2 Liter | 1:13 |
| <ul style="list-style-type: none"> Detergents (House hold bleach, Soap, NaHCO₄) Disinfectants (Formalin, Ethyl alcohol, KMnO₄) and Quaternary ammonia, Tincture of iodine savlon and saline water | | | | |
| 2 | Drug | Anthelmintics, Antibiotics, Calcium borogluconate, electrolytes | | As required |
| 3 | Feeding material | Feed trough Water trough | | As required |
| 4 | Animal feeds | Concentrated, roughage feed and supplements | | As required |
| 5 | Record book | | 2 | 1:13 |
| 6 | Urea and molasses | To treat feed | | As required |
| D. Tools and Equipment | | | | |
| 1. | PPE | Boots, hat, coverall, apron, facemask, ear muff, gloves | 25 each | 1: 1 |
| 2 | Heavy duty balance | | 1 | 1:25 |
| 3 | Milking Can | | 5 | 1:5 |
| 4 | Milking machine | | 1 | 1:25 |
| 5 | Hypodermic syringe and needle | | 5 | 1:5 |



| | | | | |
|----|--|--|---|-------------|
| 6 | Vaccination syringe and needle | | 2 | 1:12 |
| 7 | Obstetric kit | | 1 | 1:25 |
| 8 | Scissor, blade, forceps, suture material, gauze, cotton, towel | | | As required |
| 10 | Blanket, bedding and colostrum feeder | | | As required |

LEARNING MODULE 07

TVET-PROGRAMME TITLE: Animal Health **Level I**

MODULE TITLE: **Applying Agricultural Extension**

MODULE CODE: **AGR ANH1 M07 0422**

NOMINAL DURATION: **46** Hours

MODULE DESCRIPTION: This module covers the knowledge, skills and attitudes required to understand the Concept and evolution of agricultural Extension, apply extension methods and Approaches, apply Agricultural extension Communication and facilitation for technology promotion, Conduct training and record and document data.

LEARNING OUTCOMES

At the end of the module the trainee will be able to:

- LO1.** Understand the Concept and Evolution of Agricultural Extension
- LO2.** Apply Extension Methods and Approaches
- LO3.** Apply Agricultural Extension Communication and Facilitation for Technology Promotion
- LO4.** Conduct Training
- LO5.** Record and Document Data

MODULE CONTENTS:

LO1. Understand the Concept and evolution of Agricultural Extension

- 1.1.** The concept of Agricultural extension
- 1.2.** The evolution and progress of agricultural extension
- 1.3.** The role of extension in agricultural development
- 1.4.** The importance of Agricultural extension
- 1.5.** Extension planning

LO2. Apply Extension methods and Approaches

- 2.1.** Extension methods
- 2.2.** Extension approaches
- 2.3.** The importance of extension methods and approaches
- 2.4.** Applying appropriate extension methods and approaches

LO3. Apply Agricultural Extension Communication and Facilitation for technology promotion

- 3.1.** The concept, principle and type of communication
- 3.2.** Identifying, understanding and solving communication barriers,
- 3.3.** Elements of communication

| |
|---|
| <p>3.4. Audio visual techniques</p> <p>3.5. Roles and characteristics of extension communicator</p> <p>3.6. The basic concept of facilitation</p> <p>3.7. Roles and responsibilities of a facilitator</p> <p>3.8. Conflict resolution skills</p> <p>3.9. The skills of a facilitator</p> <p>LO4. Conduct Training</p> <p>4.1. Conducting needs assessment</p> <p>4.2. Carrying-out preparation</p> <p>4.3. Conducting the implementation training</p> <p>4.4. Carrying out Evaluation</p> <p>LO5. Record and Document Data</p> <p>5.1. Developing data collecting formats</p> <p>5.2. Collecting and organizing appropriate data</p> <p>5.3. Documenting and reporting collected and organized data</p> |
| LEARNING METHODS: |
| <ul style="list-style-type: none"> • Lecture and Discussion • Demonstration • Simulation • Role playing |
| ASSESSMENT METHODS: |
| <ul style="list-style-type: none"> • Quiz, Written test, Oral questioning, Written exam • Individual and group assignment • Practical demonstration |

ASSESSMENT CRITERIA:

LO.1. Understand the Concept and evolution of Agricultural Extension

- The concept of Agricultural *extension* is understood to gain relevant knowledge
- The evolution and progress of agricultural extension is expressed to understand the concept of Agricultural Extension
- The role of extension in agricultural development is understood to deliver effective extension services
- The importance of Agricultural extension is determined to have appropriate knowledge,
- Extension planning is understood to determine extension activities

LO.2 Apply Extension methods and Approaches

- Extension methods are understood to provide Extension services based on organizational standard, extension systems, extension strategy and extension guide lines
- Extension approaches are understood for implementation of extension services
- The importance of extension methods and approaches are understood for Agricultural extension service delivery
- Appropriate extension methods and approaches are applied to transfer agricultural technologies, based on organizational standard, extension systems, extension strategy and extension guide lines,

LO.3. Apply Agricultural Extension Communication and Facilitation for technology promotion

- The concept, principle and type of communication is understood to have good extension communication knowledge & skill
- Communication barriers are identified, understood and solved to undertake effective communication
- Elements of extension communication are defined and used to create positive environment for communication
- Audio visual techniques are understood to provide Agricultural Extension and communication delivery services
- Roles and characteristics of extension communicator are recommended to improve the

communicator's performance

- The basic concept of facilitation is understood to improve facilitation skills
- The roles and responsibilities of a facilitator is applied to progress facilitation skills
- Conflict resolution skill is understood to enhance homogeneity
- The skills of a facilitator are applied for communication & technology promotion.

LO4. Conduct Training.

- Need assessment is conducted to provide appropriate training
- Preparation is carried-out to facilitate the training process
- Implementation is conducted to capacitate trainees based on organizational training guide line
- Evaluation is carried-out to understand the outcome

LO 5. Record and Document Data

- Data collecting formats are developed
- Appropriate data are collected and organized
- Collected and organized data are documented and reported



Annex: Resource Requirements

| AGR ANH1 M07 0422 Applying Agricultural Extension Service | | | | |
|--|---|---|-----------------|--|
| Item No. | Category/Item | Description/ Specifications | Quantity | Recommended Ratio (Item: Trainee) |
| A. Learning Materials | | | | |
| 1. | TTLM | prepared by the trainer | 25 pcs | 1:1 |
| 2. | Reference Books | | | |
| 2.1 | Rural Extension: Basic Issues and Concepts | Hoffman, V., <i>et al.</i> 2009. Vol. I 3 rd edition | 5 pcs | 1:5 |
| 2.2 | Rural Extension: Basic Issues and Concepts | Hoffman, V., <i>et al.</i> 2009. Vol. II 3 rd edition | 5 pcs | 1:5 |
| 2.3 | Rural Extension: Basic Issues and Concepts | Hoffman, V., <i>et al.</i> 2009. Vol. III 3 rd edition | 5 pcs | 1:5 |
| 2.4 | Communication for Rural Innovation | Lewis, C., 2004 3 rd edition | 5 pcs | 1:5 |
| 2.5 | Concepts and Practices in Agricultural Extension in Developing Countries: A Source Book | Ananadayasekeram, P., <i>et al.</i> 2008. | 5 pcs | 1:5 |
| 2.6 | Agricultural Extension in Developing Countries | Adams M. E., 1992 | 5 pcs | 1:5 |
| 2.7 | Agricultural Extension | FAO, ... | 5 pcs | 1:5 |
| 3. | Journals/Publication/Magazines | | | 1:5 |
| | - Sustainable Agricultural Extension Manual for Eastern and Southern Africa | IIRR, 1998 | 5 pcs | 1:5 |
| B. Learning Facilities and Infrastructure | | | | |
| 1. | Lecture Room | 7 m* 8m | | 1:25 |



| | | | | |
|-----------|---|---|--------|-------------|
| 2. | Library | 1.7m ² per trainee | | |
| 3. | Audio Visual Center | | 1 | 1:25 |
| 4. | Smart Class* | | 1 | 1:25 |
| | <ul style="list-style-type: none"> A DVD/VHS combination, RCA video and audio input cable, Laptop VGA and audio input cable and network connectivity | | | |
| C. | Consumable Materials | | | |
| 1. | Stationary Paper | Paper, Pen, Pencil, Chalk, Duster, Duster, Marker, Flip Chart | | As required |
| D. | Tools and Equipment | | | |
| 1. | Audio and Video recorder | | 1 pcs | 1:25 |
| 2 | Computer | | 25 pcs | 1:1 |
| 3 | LCD | | 1 pcs | 1:25 |
| 4 | Whiteboard | | 1 pcs | 1:25 |
| 5 | Blackboard | | 1 pcs | 1:25 |
| 6 | Flip Chart Stand | | 1 pcs | 1:25 |
| 7 | Projection Screen | | 1 pcs | 1:25 |

| |
|---|
| TVET-PROGRAMME TITLE: Animal Health Level I |
| MODULE TITLE: Implementing Agribusiness Marketing |
| MODULE CODE: <u>AGR ANH1 M08 0422</u> |
| NOMINAL DURATION: 36 Hours |
| MODULE DESCRIPTION: This module covers the knowledge, skills and attitude required to Understand concept of agricultural marketing Understand concepts of agribusiness Identify marketing targets for Agricultural products Implement marketing strategy . Establish contract farming, and Apply Agricultural marketing services. |
| <p>LEARNING OUTCOMES</p> <p>At the end of the module the trainee will be able to:</p> <p>LO1. Understand concept of agricultural marketing</p> <p>LO2. Understand concepts of agribusiness</p> <p>LO3. Identify marketing targets for Agricultural products</p> <p>LO4. Implement marketing strategy</p> <p>LO5. Establish contract farming</p> <p>LO6. Apply Agricultural marketing services</p> |
| <p>MODULE CONTENTS:</p> <p>LO1. Understand concept of agricultural marketing</p> <ol style="list-style-type: none"> 1.1. Concept of agricultural marketing 1.2. Importance of agricultural marketing 1.3. Roles of agricultural market 1.4. Principles of agricultural marketing 1.5. Marketing mix 1.6. Types of marketing <p>LO2. Understand concepts of agribusiness</p> <ol style="list-style-type: none"> 2.1 Concept of agribusiness 2.2 Importance of agribusiness 2.3 Roles of agribusiness 2.4 Principles And Characteristic of agribusiness 2.1 Dimension and structures of Agribusiness <p>LO3. Identify marketing targets for Agricultural products</p> <ol style="list-style-type: none"> 3.1. Marketing strategy 3.2. Approaches of agricultural market |

- 3.3. Market Segment descriptors
- 3.4. Agricultural marketing options
- 3.5. Marketing plan
- 3.6. Analyzing cost and benefit

LO4. Implement marketing strategy

- 4.1. Agricultural marketing functions strategy
- 4.2. Preparing marketing Action plan
- 4.3. Resource for agricultural marketing

LO 5. Establish contract farming

- 5.1. Concept of contract farming
- 5.2. Types of contract farming
- 5.3. Models of Contract farming
- 5.4. Steps and procedures of contract farming
- 5.5. Contract farming requirements
- 5.6. Contract farming systems

LO6. Apply Agricultural marketing services

- 6.1. Types of Agricultural products
- 6.2. Conducting Need assessment
- 6.3. Develop Market strategies
- 6.4. Customer feedbacks

LEARNING METHODS:

- Lecture and Discussion
- Demonstration
- Simulation
- Role-playing

ASSESSMENT METHODS:

- Written test with Oral questioning
- Practical demonstration

ASSESSMENT CRITERIA:

LO.1 Create awareness about cooperative

- Concept of agricultural marketing is understood for Agricultural marketing
- Importance of agricultural marketing is understood to provide agricultural marketing services
- Roles of agricultural market-oriented service is identified and understood
- Principles of agricultural marketing and strategies are identified and understood
- Marketing mix is understood to implement agricultural marketing activities
- Types of marketing are understood and identified to implement the appropriate marketing services

LO. 2. Understand concepts of agribusiness

- Concept of agribusiness is understood for Agricultural marketing
- Importance of agribusiness is understood to provide agribusiness services
- Roles of agribusiness-oriented service is identified and understood
- Principles of agribusiness and strategies are identified and understood
- Characteristic of Agribusiness are understood to implement Agribusiness
- Dimension and structures of Agribusiness are understood and distinguished

LO.3. Identify marketing targets for Agricultural products

- Marketing targets are identified for Agricultural products and services
- Approaches of agricultural market are understood for agricultural market product and service
- Segment descriptors are used to display the targets of agricultural market
- Strategic of agricultural marketing options are identified to develop agricultural marketing plan
- Business plans are prepared to perform cost and benefit analysis.

LO.4 Implement marketing strategy

- Agricultural marketing functions strategy is designed to perform agriculture business.
- Action plan is developed to implement Agricultural marketing strategies.
- Require resource are identified and coordinated to implement agricultural marketing
- Marketing mix is implemented according to the strategy Agricultural.



LO. 5. Establish contract farming

- Concept of contract farming
- Types of contract farming
- Models of Contract farming
- Steps and procedures of contract farming establishments
- Contract farming requirements
- Contract farming systems

ASSESSMENT CRITERIA:

LO.1 Create awareness about cooperative

- Concept of agricultural marketing is understood for Agricultural marketing
- Importance of agricultural marketing is understood to provide agricultural marketing services
- Roles of agricultural market-oriented service is identified and understood
- Principles of agricultural marketing and strategies are identified and understood
- Marketing mix is understood to implement agricultural marketing activities
- Types of marketing are understood and identified to implement the appropriate marketing services

LO. 2. Understand concepts of agribusiness

- Concept of agribusiness is understood for Agricultural marketing
- Importance of agribusiness is understood to provide agribusiness services
- Roles of agribusiness-oriented service is identified and understood
- Principles of agribusiness and strategies are identified and understood
- Characteristic of Agribusiness are understood to implement Agribusiness
- Dimension and structures of Agribusiness are understood and distinguished

LO.3. Identify marketing targets for Agricultural products

- Marketing targets are identified for Agricultural products and services
- Approaches of agricultural market are understood for agricultural market product and service
- Segment descriptors are used to display the targets of agricultural market
- Strategic of agricultural marketing options are identified to develop agricultural marketing plan
- Business plans are prepared to perform cost and benefit analysis.

LO.4 Implement marketing strategy

- Agricultural marketing functions strategy is designed to perform agriculture business.



- Action plan is developed to implement Agricultural marketing strategies.
- Require resource are identified and coordinated to implement agricultural marketing
- Marketing mix is implemented according to the strategy Agricultural.

LO. 5. Establish contract farming

- Concept of contract farming
- Types of contract farming
- Models of Contract farming
- Steps and procedures of contract farming establishments
- Contract farming requirements
- Contract farming systems

Annex: Resource Requirements

| AGR CAA1 M04 0422 Implement Agribusiness Marketing | | | | |
|--|--|--|--------|-----------------------------------|
| Item No. | Category/Item | Description/ Specifications | Qty. | Recommended Ratio (Item: Trainee) |
| A. Learning Materials (Disability inclusive learning guide) | | | | |
| 1. | TTLM | Prepared by trainer | 35 Pcs | 1:1 |
| 2. | Reference Books | | | |
| 2.1 | Rural marketing | Ravindranath V. 2015. 3 rd ed | 5 Pcs | 1:5 |
| 2.2 | Basic marketing | William D. 2005 15 th ed. | 5 Pcs | 1:5 |
| 2.3 | Applications in basic marketing | William D.2006 | 5pcs | 1:5 |
| 2.4 | Economics applications to agriculture and agribusiness | Randaii D, 1997 4 th .ed. | 5psc | 1:5 |
| 2.5 | Agribusiness management and entrepreneurship 3rd 1994 | Michael E, 1994 .3 rd . ed | | |
| 3. | Journals/Publication/Magazines | Published/unpublished | 2 Pcs | 1:12 |
| B. Learning Facilities and Infrastructure | | | | |
| 1. | Lecture room | 7m*8m | | |
| 2. | Cooperative lab/ business incubation center | 105 – 180 m ² | | |
| 3. | Library | 105 – 180 m ² | 1 | 1:25 |
| 4. | Instructional Audio video | Library/classroom | 1 | 1:1 |
| 5. | Visual training Media | LCD, Laptops | 1 Pcs | 1:25 |
| 6. | Teaching boards | White board ,Flip chart ,Smart board | 1 Pcs | 1:25 |
| 7. | Arm chair | 54Cm *72 Cm *100Cm | 25 Pcs | 1:1 |
| 8. | Notice board | 150*100 Cm | 1 Pcs | 1:25 |
| 9. | White board | 240 Cm *120 Cm | 1 Pcs | 1:25 |
| Consumable material | | | | |



| | | | | |
|----|----------------------------------|----------|--------|------|
| 1 | White board and permanent marker | Pc | 4 | 1:2 |
| 2. | Flip chart | Pcs | 5 Pcs | 1:5 |
| 3. | Tools and equipment | | | |
| 4. | Computer | Standard | 12 Pcs | 1:2 |
| 5. | Printer | Standard | 1 Pcs | 1:25 |
| 6. | Computer table | Standard | 5 Pcs | 1:5 |
| 7. | Shelves | Standard | 2 Pcs | 1:12 |

| LEARNING MODULE 09 | |
|--|--|
| TVET-PROGRAMME TITLE: Animal Health Level I | |
| MODULE TITLE: Applying Basics of Human Nutrition Practices | |
| MODULE CODE: AGR ANH1 M 09 0422 | |
| NOMINAL DURATION: 36 Hours | |
| <p>MODULE DESCRIPTION: This module covers the knowledge, skill and attitude required to categorize agricultural foods items, recognize malnutrition in the community, identify the role of agriculture in nutrition and contribute to the awareness creation of the community in utilization of agricultural products.</p> | |
| <p>LEARNING OUTCOMES</p> <p>At the end of the module the trainee will be able to:</p> <p>LO1. Identify Categories of agricultural foods items</p> <p>LO2. Recognize malnutrition in the community</p> <p>LO3. Identify the role of agriculture in nutrition</p> <p>LO4. Demonstrate diversified Agricultural food production and consumption techniques</p> <p>LO5. Perform proper handling and storage of agricultural food products</p> <p>LO6. Document and report food production, consumption and difficulties</p> | |
| <p>MODULE CONTENTS:</p> <p>LO.1: Identify Categories of agricultural foods items</p> <ol style="list-style-type: none"> 1.1. Basic terminologies and concepts in nutrition 1.2. Identifying and explaining food sources, their categories and nutritional content 1.3. Identification of Energy dense and nutrient dense food stuffs <p>LO.2 : Recognize malnutrition in the community</p> <ol style="list-style-type: none"> 2.1 Physical signs of malnutrition 2.2 Forms, causes and consequences of malnutrition in the community 2.3 Identifying measures taken in maintaining and promoting balanced diet 2.4 Recognizing contributions done to create community awareness <p>LO.3: Identify the role of agriculture in nutrition</p> <ol style="list-style-type: none"> 3.1. The role of agriculture as source of variety foods 3.2. Agricultural sector in nutrition sensitive intervention 3.3. Identifying nutrition sensitive agricultural practices <p>LO.4: Demonstrate diversified Agricultural food production and consumption techniques</p> <ol style="list-style-type: none"> 4.1. The importance of diet diversification | |

- 4.2. Techniques of diversifying food production
- 4.3. Implementing the techniques of enhancing nutrient content
- 4.4. Cooking techniques for specific agricultural products
- 4.5. Preparation of balanced and nutrient dense diet

LO5: Perform proper handling and storage of agricultural food products

- 5.1. Importance of hygiene for nutrition
- 5.2. Construction of food storage facilities
- 5.3. Methods for Safe handling and storage of agricultural products
- 5.4. Demonstration of Safe handling and storage of agricultural products

LO6: Document and report food production, consumption and difficulties

- 6.1. Documenting diversified food production and consumption activities
- 6.2. Reporting difficulties in production and consumption of diversified agricultural food products

LEARNING METHODS:

- Brainstorming
- Answer and questionne
- Lecture and Discussion
- Démonstration
- Field visits
- Audio Visual
- Project work

ASSESSMENT METHODS:

- Written test
- Oral questioning
- Practical demonstration
- Project work

ASSESSMENT CRITERIA:

LO.1: Identify Categories of agricultural foods items

- Basic terminologies and concepts in nutrition are identified and explained
- Food groups, nutrient and their sources of balanced diet are identified and explained
- Origin and composition of food stuffs are identified and described

- Energy dense and nutrient dense food sources are identified and explained

LO.2: Recognize malnutrition in the community

- Physical signs of malnutrition are identified and explained
- Forms, causes and consequences of malnutrition in different groups of community are identified
- Measures to overcome malnutrition, importance of maintenance of adequate and balanced diet are promoted
- Contribution is made in elders, family heads and women awareness creation programs

LO.3: Identify the role of agriculture in nutrition

- The role of agriculture as source of variety foods is recognized and promoted
- The contribution of agriculture sector in nutrition sensitive intervention is described
- Nutrition sensitive agricultural practices are identified and communicated as per the nutrition program guideline

LO.4: Demonstrate diversified Agricultural food production and consumption techniques

- Importance of diet diversification is identified and discussed with family holds and community according to the program guideline
- Techniques of diversified food production are identified and demonstrated to farmers and family members
- Techniques of enhancing the nutrient content of family foods are assessed and implemented according to the program guideline and cultural requirements of the rural community
- Utensils are identified and cooking techniques demonstrated for specific agricultural products
- PPE are selected and used in accordance to OHS requirement and code of ethics
- Balanced and nutrient dense diet preparation is demonstrated using food stuff ingredients

LO.5: Perform proper handling and storage of agricultural food products

- Importance of hygiene for nutrition is explained
- Storage facilities are identified and family holds supported in construction.
- Agricultural products are safely handled and stored
- Methods and techniques of safely handling and storing agricultural products are demonstrated in accordance products requirement



LO.6: Document and report food production, consumption and difficulties

- Diversified food production and consumption activities are documented
- Difficulties happened in the processes are reported to the respective authorities

Annex: Resource Requirements

| AGR ANH1 M09 0422:Appling Basics of Human Nutrition Practices | | | | |
|--|--|--|-----------------|--|
| Item No. | Category/Item | Description/ Specifications | Quantity | Recommended Ratio (Item: Trainee) |
| A. | Learning Materials | | | |
| 1. | TTLM | Prepared by the trainer | 25 | 1:1 |
| 2. | Reference books | | 6 | 1:4 |
| 2.1 | Effects of total fat intake on body weight | Hooper <i>et al.</i> , 2015 | 5 pcs | 1:5 |
| 2.2 | Diet, nutrition and the prevention of chronic diseases | WHO/FAO Expert Consultation. WHO Technical Report Series, No. 916. 2003 | 5 pcs | 1:5 |
| 2.3 | Fats and fatty acids in human nutrition: report of an expert consultation | FAO UN, 2010 | 5 pcs | 1:5 |
| 2.4 | WHO scientific update on health consequences of trans fatty acids: introduction. | Nishida C, and Uauy R., 2009 | 5 pcs | 1:5 |
| 3. | Guideline and manuals | | | |
| 3.1 | National Nutrition Sensitive Agriculture Strategy | Federal Democratic Republic of Ethiopia 2017 Addis Ababa, Ethiopia | 3 pcs | 1:8 |
| 3.2 | National Nutrition Sensitive Agriculture Training Manual for Agricultural Development Agents | Ministry of Agriculture, Addis Ababa, 2018 | 3 pcs | 1:8 |
| 3.3 | Agricultural food source handling | Prepared by Ethiopian agricultural research centers, ILRI, Universities and colleges | 3 pcs | 1:8 |
| 4 | Food preparation | online | | |



| | | | | |
|--|--|--|----------------|-------------|
| 4.1 | All Current Publications Paper | USU, "Food Preparation Manual Meats, 2005; https://digitalcommons.usu.edu/extension_cura/11/1118 | | 1:1 |
| 4.2 | Food Safety First Manual | www.fsafood.com/main/libraries/documents/food_safety_first_manual.sflb.ashx | 3 | 1:8 |
| 5 | Audio Visual (video-audio), Television channel | kitchen operating procedures (Jordanian ketch show) | 1 | 1:25 |
| 6 | Journals/Publication/Magazines | Prepared by WHO and FAO journals/Online and printed | 6 | 1:4 |
| B. Learning Facilities and Infrastructure | | | | |
| 1. | Lecture room | 7m*8m | | 1:25 |
| 2 | library | 105 – 180 m2 area Needed Per Trainee | | 1:25 |
| 3 | workshop | 4m*25m | | 1:25 |
| 4 | Well-equipped Computer Room | 7m*8m | | 1:25 |
| 5 | Kitchen | in the hotel | | 1:25 |
| 6 | Food storage area | In the food storage Warehouse, | | 1:25 |
| 7 | vehicle | bus | | 1:25 |
| 8 | White board | 240 Cm * 120 Cm | | 1:25 |
| C. Consumable Materials | | | | |
| 1. | Stationary materials | Pens, paper, pencils/ Marker, Chalk | 2Packs/1 Gross | As required |
| 2 | Different types of food stuff | Energy source | 12kg | 1:2 |
| | | Protein source (crops, meat, egg, milk) | 12 kg/1 | 1:2 |
| | | Oils | 2 ltr | 1:13 |
| | | Mineral and vitamin sources | 4 kg | 1:6 |
| | | spices | 1 pack | 1:25 |
| 3 | Cleansing materials and lotions | Liquid soap and paraffin | 1 ltr | 1:25 |
| D. Tools and Equipment | | | | |
| 1. | Kitchen kits | Stainless steel | 1 | 1:25 |
| 2 | Electronic devices | Lap top computer, Camera, smart phones, speaker, microphone | 1 | 1:25 |
| 3 | Projector and projector screen | | 1 | 1:25 |

APPENDEX-1

| Learning Methods: | | | | |
|----------------------------|--|--|---|--|
| For none impaired trainees | Reasonable Adjustment for Trainees with Disability (TWD) | | | |
| | Low Vision | Deaf | Hard of hearing | Physical impairment |
| Lecture-discussion | <ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points | <ul style="list-style-type: none"> ❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points | <ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees | <ul style="list-style-type: none"> ❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop |

| | | | | |
|--------------------------------|--|--|--|--|
| <p>Demonstration</p> | <ul style="list-style-type: none"> ❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation | <ul style="list-style-type: none"> ❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ Provide tutorial support (if necessary) | <ul style="list-style-type: none"> ❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ Provide tutorial support (if necessary) | <ul style="list-style-type: none"> ❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ Provide tutorial support (if necessary) |
| <p>Group discussion</p> | <ul style="list-style-type: none"> ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work | <ul style="list-style-type: none"> ❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member | <ul style="list-style-type: none"> ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly | <ul style="list-style-type: none"> ❖ Introduce the trainees with their peers |

| | | | | |
|------------------------------|---|---|---|---|
| Exercise | <ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process | <ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies | <ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training | <ul style="list-style-type: none"> ❖ Assign peer trainees ❖ Use additional nominal hours if necessary |
| Individual assignment | <ul style="list-style-type: none"> ❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy | <ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material | <ul style="list-style-type: none"> ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material | |

| ASSESSMENT METHODS: | | | | |
|-----------------------------------|--|--|---|---|
| Interview | | <ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension | <ul style="list-style-type: none"> ❖ Speak loudly ❖ Using sign language interpreter if necessary | <ul style="list-style-type: none"> ❖ Use written response as an option for the trainees having speech challenges |
| Written test | <ul style="list-style-type: none"> ❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader (if necessary) ❖ Time extension | <ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension | <ul style="list-style-type: none"> ❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary. | <ul style="list-style-type: none"> ❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment |
| Demonstration /Observation | <ul style="list-style-type: none"> ❖ Brief the instruction or provide them in large text ❖ Time extension | <ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension | <ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension | <ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension |

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