# Government of Tripura Directorate of Animal Resources Development P.N. Complex: Agartala Tripura West e-Mail: ardd.tripura@gmail.com

F.NO.5(607)/ARDD/Skill.Dev/MVS/2023

Dated

/ 03/2024

#### **ADDENDUM**

Please refer attached tentative Course Curriculum for 1(one) year training course on 'Minor Veterinary Services.

And

The last date of submission of Bid of e-tender (e-Tender ID:2024\_ARDD\_48288-1,date 07 March 2024) invited for selection of an agency who will be responsible for shortlisting the candidate ,selection of 250 nos of unemployed youth and conducting one year training on Minor Veterinary Services will be on 6<sup>th</sup> April.2024 at 5.30 PM instead of 01/04/24 at 5.30 PM and said Bid will be opened on 8<sup>th</sup> April.2024 at 11.30 AM instead of 2<sup>nd</sup> April.2024.

All other clauses of the e-Tender ID:2024\_ARDD\_48288-1, date 07 March 2024, content of Minutes of the Pre-bid meeting dated 16/03/24 & Corrigendum dated 21.03.24 will be remained unchanged.

**Enclo: As stated.** 

(Dr. N.K. Chanchal, IFS)

Director

Animal Resources Development Deptt.

GOVERNMENT OF TRIPURA
ANIMAL RESOURCES DEVELOPMENT DEPARTMENT
VETERINARY TRAINING INSTITUTE
RADHAKISHORE NAGAR, WEST TRIPURA, PIN- 799008

SYLLABUS/COURSE CURRICULUM FOR 1(ONE) YEAR TRAINING COURSE ON "MINOR VETERINARY SERVICE",

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# SYLLABUS/COURSE CURRICULUM FOR 1(ONE) YEAR TRAINING ON "MINOR VETERINARY SERVICE"

#### Introduction:

The program is aimed for training of unemployed youth on "Minor Veterinary Service" (MVS) adhering to the Guidelines/Modalities with the objective of building the following key competencies amongst the learner.

After successful completion of this programme, the participants will be able to perform the following nature of works under the supervision of registered Veterinarians.

- 1. Provide basic curative and preventive care to animals.
- 2. Provide basic First-aid to animals and birds
- 3. Provide assistance to Veterinarian during surgery in various veterinary institutions & private clinics.
- 4. Assist in veterinary institutions and clinic management.
- 5. Assist public agencies in control of animal diseases.
- 6. Assist to conduct common laboratory tests
- 7. Assist in extension activities in Animal Husbandry practices.
- 8. Assist in various survey works in connection with Animal identification, Data collection and Documentation processes.
- 9. Assist in Implementation of Animal breeding services.
- 10. Assist in Implementation of guidelines related to Animal Welfare.
- 11. Supervision & management of livestock and poultry farms.
- 12. Assist in Implementation of Developmental programmes .
- 13. Assist in Marketing of livestock farm inputs and products.
- 14. Assist in Public health related services and other regulatory activities-
- 15. Assist in breed conservation.
- 16. Assist in disaster management

# NUMBER OF SUBJECTS AND UNIT TEST (1-YEAR)

SI.No.	SUBJECT	COURSE	CREDIT HOURS
4	Semester – I (4.5 Months)		
1	Anatomical structure of animals & birds	(VAN)	2+1 = 3
2	Introductory Physiology of animals & birds	(VPY)	2+1 = 3
	Animal Husbandry Practices (Part-I)	(APM)	3+3 = 6
4	Animal feed & fodder	(ANN)	2+1 = 3
5	Knowledge about Common Diseases of animal & birds Including Poisoning and Injuries	(VPM)	4+3 = 7
6	Extension of Animal Husbandry Practices & Animal Resources Development activities and Information and Communication Tools (ICT)	(EXT)	2+1 = 3
4	Semester – II (4.5 Months)		
1	Fundamentals of Dairy & Dairy products	(LPT)	1+1 = 2
2	Minor Veterinary Surgical Aids	(VSR)	3+2 = 5
3	Implementation of Animal Breeding Services including Gynecological and Obstetrical issues	(VGO)	3+2 = 5
4	Animal Husbandry Practices (Part-II)	(APM)	3+2 = 5
5	Veterinary Pharmacology and Dispensing of Drugs	(VPT)	2+1 = 3
6	Veterinary First-Aid and use of Veterinary drugs	(VMD)	3+2 = 5
	3 Months of Compulsory Rotatory Field	d Training	3+2 = 5
1	Students need to undergo 3 Months of Compulsory Rotatory Field Training in batches at:  a) Veterinary Hospitals/ Dispensaries/DI Lab – 45 days  b) Dairy Farms /Dairy Co-operatives – 10 days c) Poultry farm – 10 days d) Farms of Regional importance: (Pig/ Goat/ Duck/Rabbit) – 25 days		0+6

(VAN)	Veterinary Anatomy	(LPT)	Livestock Product Technology		
(VPY)	Veterinary Physiology	(VSR)	Livestock Product Technology		
(APM)	Animal Production &	(VGO)	Veterinary Surgery & Radiology		
(	Management	(VGO)	Veterinary Gynecology & Obstetrics		
(ANN)	Animal Nutrition & Fodder	(VPT)	Veterinary Pharmacology &		
(VPMP)	Veterinary Pathology Microbiology & Parasitology	(** 1)	Toxicology		
(EXT)	Veterinary Extension Education	(VMD)	Veterinary Medicine		

## Number of Theory & Practical Classes/ batch comprising with 50 trainees per batch.

SI. No.	Particulars	Number of Theory Classes @ 1.00 hrs per class	Number of Practical classes @1.5 hrs per class	Total
1	Semester – I (4.5 Months) 50 Trainees Per Batch	270	180	450
2	Semester – II (4.5 Months) 50 Trainees Per Batch	270	180	450
3	Compulsory Rotatory Field Training 25 Trainees Per Batch	0	72 (Full day)	72

#### N.B:

- 1) Subject wise resource person/lecturer will conduct requisite classes, Class interaction including practical classes. Departmental Institutions will be provided for practical classes on request basis. The training provider and resource person shall coordinate with the in charge of concerned institution.
- 2) On the basis of Provisional result, further chance will be given for supplementary examination to clear the subject, if any, within 15 (fifteen) days after publication of result.

# COURSE CURRICULUM OF MINOR VETERINARY SERVICE TRAINING COURSE

0-	NI -	SEMESTER – I (4.5 Months)	
Cours e No.	Course	Syllabus	Credit hour
VAN – 101	Anatomical structure of animal and birds.	Basic idea about Skeleton(bones), Major Joints, Muscles, Tendon, Ligaments, Skin, Major vein & arteries, Eye, Ear, Nose, Buccal Cavity, Teeth, Tongue, Lymph Nodes, udder of mammals, salivary glands, Endocrine glands, Brain & spinal cord, Heart, Liver, Lungs, Spleen, Kidney and Ruminant — Non ruminant Stomach etc.Familiarize with the boundaries of Thoracic cavity, Abdominal cavity and Pelvic cavity and clinical importance of Flank region & para lumber fossa.	2+1=3
VPY – 101	Introductory Physiology of animals and birds.	of the body like Digestive system, Respiratory system	2+1=3
APM – 101	Animal Husbandry Practices (Part – I)	Common technical terms used for livestock and birds. Different breeds of domestic animals and birds. Rearing System of livestock and birds in rural and farm conditions (Cattle, Pig, Goat, Rabbit, and Duck& Poultry). Housing, Breeding, Feeding and Management with special reference to Geo-climatic & Socio-economic condition of Tripura. Importance of livestock products like Milk, Meat, Egg & other by-products. Hygiene & Sanitation, Disposal of Manure & Carcasses. Controlling, restraining of animals and handling of birds. Familiarize with the tools used for the same. Common behavior of farm animals and personal safety while approaching to animals. Practice of routine work in farms – Apparent Health Checkup, Cleaning, Washing, Disinfection, Grooming, Feeding, Watering, Medication, Vaccination, debeaking, Milking, Collection & Disposal of Milk and eggs, Record keeping etc. Identification of animal by ear tagging after Vaccination/ Artificial Insemination. Administration of Drug by different routes such as Oral, Intramuscular (I/M), Subcutaneous (S/C), Intravenous(I/V), Intra-articular (I/A) and Intra-mammary etc. Hatchery Operation, Operation of Feed Mixing Plant. Data Collection and Survey methods.	3+3=6
NN – 01	Animal feed & fodder	FEED: -Basic Constituent of feed such as Carbohydrate, Protein, Fat, Vitamin, Minerals and water & their importance. Feed ingredients such as Grains, Oil cakes, Bran ,Fish meal, Blood meal, Bone meal ,Tubers and	2+1=3

		other agricultural by-products. General idea about Balanced feed and computation of ration.FODDER:- *Different kind of Green grass (Leguminous & Non leguminous), Fodder trees, Straws, Hay and Silage etc. *Cultivation of fodder like Hybrid Napier, Maize, Cowpea, Topioca, Oats and Sweet potato etc. Silvi Pasture, Harvesting and preservation of fodder. Enrichment of straw & Chopping of fodder etc.	
VPMP - 101	Knowledge about Common Diseases of animal & birds Including Poisoning and Injuries.	classification, cardinal signs and systemic effects.  Concept of immunity to Microbes and Aptibiotic	
EXT – 101	Extension of Animal Husbandry Practices and Animal Resources Development activities.	Understand the structure and functioning of Government extension delivery system and method of extension activities for popularization & adaptation of A.H. practices. Knowledge about different ARD schemes implemented by the department. Co-operative system in dairy, poultry, piggery, duckery and goatery. Formation of Co-operatives and their management. Farmers training programe and motivation etc. Involvement of panchayet for extension and developmental ARD program through 3-tier Panchayeti Raj system. Livestock Census and Sample survey for major livestock products- Milk,Meat& Egg. Participatory approach in rural development — Gramodaya. Interaction/group meeting with Gram Panchayet, Villagers and farmers. Exhibition and Mela. Identification of different	2+1 = 3

		kind of publicity west 11 to 111	
		kind of publicity materials and their uses. Field visit, data collection and record keeping of different ARD related activities.	
		SEMESTER - II (4.5 Months)	
Cours e No.	Course	Syllabus	Credit hour
LPT - 201	Fundamentals of Dairy & Dairy products.	with and it's composition, nutritive value.	1+1 = 2
VSR – 201		Common surgical cases like Inflammation, wound, necrosis, gangrene, abscess, ulcer, tumor, Hernia, sprain, dislocation of joint, fracture of bone, avulsion of horn, dehorning, traffic accidental injury etc. Various methods of sterilization of surgical instruments, preparation of patient for operation, dressing of wounds, suture materials, asepsis and antisepsis.  Minor surgical aids in infection/injury of eye, ear, fracture of bone, haemorrhage/ bleeding, castration etc. Minor surgical aids in Prolapsed vagina, uterus, rectum etc. Retention of placenta, metritis, pyometra and dystocia. Demonstration of different surgical instruments and appliances for minor and major operation and their sterilization.	3+2 = 5
VGO – 201	Brooding	Familiarize with the reproductive system in farm animal and birds. Familiarize with the basic aspect of reproductive physiology and genetics in case of farm	3+2 = 5

APM	including Gynecologica and Obstetrical issues	Artificial Insemination and Do's & don't for the same in farm animals. Familiarize with the structure of liquid Nitrogen container and proper handling & safety guideline for liquid Nitrogen. Conduct Artificial Insemination in cattle and small animals. Familiarize with the process of parturition/ furrowing in cattle, goal and pig. Undertake performance monitoring and maintain mandatory breeding records at farmers/organizations level (including IT based system for breeding data management).Perform pregnancy diagnosis as per guideline / facilities of organization. Maintenance of Breeding bulls, Castration of scrub bulls ⁢'s implementation.	
201	Animal Husbandry Practices (Part-II)	Commercial dairy farming, Commercial goat farming, Commercial pig farming, Commercial rabbit farming, Commercial duck farming, Commercial poultry(Layer) farming, Commercial broiler farming, Farm economics – loss and profit calculation.	
VPT – 201	Veterinary Pharmacolog y & Dispensing of Drugs	Definition of Veterinary Pharmacology, Common abbreviation used in Registered veterinarian's prescription, Basic concept of different routes of administration of drugs, Relationship of body weight and dose of drugs, Variation of drug action administered by different routes. Incompatibilities. Classification of drugs – Definition with examples.Brief idea about Drugs acting on different systems like Digestive system, Respiratory system, Blood vascular system, Excretory system, Nervous system, Reproductive system and surface of skin. Brief idea about Drugs acting on different types of Microbes – use, side effect, contraindication &Antidotes. Demonstration of different drug samples, instrument & appliances used in veterinary dispensary/hospitals, administration of drugs by different routes to animal & birds.	
VMD -	Veterinary	Undertake Basic treatment of emergency conditions.	3+2 = 5

First-Aid and use o Veterinary drugs	The flattic of would vis-a-vis procedure	
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#### CRITERIONS OF ATTENDANCE. -

The required condition of attendance shall not be deemed to have been satisfied in respect of the subject, unless the student has ordinarily attended all the scheduled theory and practical classes, provided, the minimum requirement of attendance shall not be less than 75% of scheduled theory and practical separately with relaxation of ten working days in a semester. A candidate having attendance below 75% in a subject shall not be eligible to appear in the semester examination of that subject.

#### CRITERIONS FOR EXAMINATION AND EVALUATION. -

- (1) It shall be the responsibility of the training provider to ensure that the topics to be covered in the theory and practical in each course shall be recorded through a lecture or practical schedule and distributed to the students at the beginning of each course and the training provider shall ensure that the schedule is adhered to and alternate arrangements are made to cover up the loss in case of any eventualities of unavoidable reasons that lead to non-adherence of the above schedule. The Principal, VTI will look after the issue time to time whether students are provided with study materials.
- (2) Work distribution chart of each teacher shall be available with Principal, VTI office and in each subject teachers shall be actively involved in teaching, especially in conducting practical.
- (3) The examination shall be to assess whether the student has been able to achieve a level of competence and for academic assessment, evaluation of practical aspects of the curriculum shall receive much greater emphasis leading to separate examinations and requiring the student to secure a minimum of 40% marks in theory as well as in practical, in each such examination.
- (4) The weight age of theory and practical shall be in the ratio of 60:40 respectively for semester exam.
- (5) The distribution of marks for objective and subjective questions in each subject shall be in the ratio of 40:60 respectively in Semester examinations.
- (6) The schedule of examination during Course for Minor Veterinary Services shall consist of 3 nos exam i.e. 1st semester exam (After completion 4 month), 2nd semester exam (after completion of 8th month) and field oriented evaluation (after 3 month Compulsory Rotatory Field Training).

#### The final result will be evaluated as details below:

35 % weightage from 1<sup>St</sup> semester exam (minimum qualifying mark is 40% in each subject) 35 % weight age from 2<sup>nd</sup> semester exam (minimum qualifying mark is 40% in each subject) 30 % weight age from Evaluation of Compulsory Rotatory Field Training (Minimum qualifying mark is 40%)

Total 100 marksand minimum qualifying marks is 40%

# 1st SEMESTER ROUTINE: SAMPLE CLASS ROUTINE AS PER THE CREDIT HOUR:

Days	10:00 - 11:00am	11:00 - 12:00pm	12:00 – 01:00 pm	1:00 - 2:00 pm	2:00 – 3:30 pm (Practical)	3:30 - 5:00 pm (Practical
Monday	VPMP – 101	VPY – 101	APM – 101	L	VPMP – 101	ANN – 101
Tuesday	VPMP – 101	APM – 101	EXT – 101	U	APM – 101	EXT - 101
Wednesday	ANN – 101	VAN – 101	VPMP – 101	N	APM – 101	VAN – 101
Thursday	EXT – 101	APM - 101	ANN – 101	С	VPMP – 101	VPY – 101
Friday	VPMP – 101	VAN – 101	VPY - 101	Н	VPMP – 101	APM – 101
Saturday  N.B. Tutorial Cl	VAN – 101 (Tutorial)	APM – 101 (Tutorial)	EXT – 101 (Tutorial)		VPMP – 101 (Tutorial)	ANN – 101 (Tutorial)

N.B. Tutorial Classes are optional

## 2<sup>nd</sup> SEMESTER ROUTINE: SAMPLE CLASS ROUTINE AS PER THE CREDIT HOUR:

Days	10:00 - 11:00am	11:00 - 12:00pm	12:00 - 01:00 pm	1:00 - 2:00	2:00 – 3:30 pm	3:30 – 5:00 pm
Monday	VSR - 201	VGO – 201	\/DT 004	pm	1/00	
Tuesday			VPT – 201	L	VGO – 201	APM - 201
	LPT - 201	VGO – 201	VMD - 201	U	VSR - 201	APM - 201
Wednesday		VSR - 201	VMD - 201	N	LPT - 201	VMD - 201
Thursday	VGO - 201	APM - 201	VMD - 201	С	VSR - 201	VPT – 201
Friday	VSR - 201	APM - 201	VPT - 201	Н	VGO - 201	VMD – 201
Saturday	VGO –	VSR -	VMD -		APM –	VPT –
N.D. Tutadal	201(Tutorial)	201(Tutorial)	201(Tutorial)		201(Tutorial)	201(Tutorial)

N.B. Tutorial Classes are optional

## MODALITIES FOR COMPULSORY ROTATORY FIELD TRAINING

Students undergoing training course need to undergo 3 Months of Compulsory Rotatory Field Training in batches after successfully passing second semester examination. This training will be carried out for a minimum period of three calendar months so as to be eligible for the award of the certificate. Compulsory rotating Field training shall include a full time training in veterinary and animal husbandry services (including emergencies and night duties, Sundays and holidays) and the trainees shall devote whole time to the training and shall not be allowed to accept a whole time or part time appointment paid or otherwise. The rotatory field training programme shall be monitored by a Committee constituted by the Director of ARDD and the Committee shall comprise of Principal, VTI or Representative or nominee of the Director of ARDD. In case of unsatisfactory work or performance or shortage of attendance or both the period of compulsory rotating field training shall be extended by one months and the student shall be reevaluated, if he still is found unsatisfactory due to any reason, the trainees hasto reregister afresh for field training programme for entire three calendar months (all the expenses to be borne by the candidate itself)

## The compulsory rotating field training shall be in the following areas, namely: -

- (i) Posting in Veterinary Hospital/ Veterinary Dispensary/ Veterinary Clinical Complex for Clinical training covering veterinary medicine, surgery and radiology, gynaecology and obstetrics, clinical emergencies, indoor ward care, lab diagnosis, ambulatory, hospital management, record keeping etc;
- (ii Meat Plant or Abattoirs, Milk Plants, Poultry Farms, Field Hospital, Animal Welfare Organization, Vaccine Institute, Feed Mixing Plant, etc. for hands on training in each establishment;
- (iii) Entrepreneurial training and management covering farm routines of cattle and buffalo farms, piggery or rabbit farming, and goat farms, and. Poultry production and management covering layer and broiler production, hatchery and chick management and learning farm practices like record keeping and other related activities;
- (iv) Each student shall submit a Project Report on completion of entrepreneurial training and this training is aimed at developing entrepreneurial skill for self-employment.
- (vii) The In charge of the Veterinary/ Others Institutions of each posting shall regulate the training of such trainees and submit the evaluation report of each trainee out of 20 marks which shall be accounted at the time of final evaluation.

## With the objective of having achieved following core competency namely:-

- a) Restraint of cow, dog and pig. & bandaging
- b) animal identification, dentition and ageing of animals;
- c) housing layout orspace requirements of livestock and poultry;
- d) computation of ration for livestock and poultry
- e) fodder management and enrichment of straw.

- f) Physical evaluation of livestock health parameters (auscultation, percussion, recording of temperature, pulse, heart rate, respiration rate etc.);
- g) recording and interpretation of cardiovascular response; (h) testing of milk and milk products for quality, clean milk production;
- h) specific diagnostic tests for zoonotic diseases;
- i) sample collection, handling and dispatch of biological materials for laboratory examination;
- j) staining techniques for routine clinico-pathological examinations;
- k) haematological evaluation (total leukocyte count, differential leukocyte count, haemoglobin, packed cell volume, erythrocyte sedimentation rate, haemoprotozoan diseases, urine analysis, fecal examination- procedures and interpretation, skin scrapings and interpretation,
- I) deworming procedures and doses for different species of animals or birds.
- m) managing an outbreak of infectious or contagious disease, approach to diagnosis of disease condition,
- n) Common surgical procedures including dehorning, docking, castration, application of plaster castor splint for fracture immobilization and other bandaging procedure in large and small animals; rectal examination—palpation of pelvic or abdominal organs in cattle and buffaloes.
- o) detection of oestrus, artificial insemination, pregnancy diagnosis; management of vaginal or uterine prolapse and dystocia; andrological examination of bull, handling, preservation and vaccination procedures, vaccination schedules and vaccine types for different diseases;
- p) managing a clinical practice, ambulatory van, transporting a sick animal requirements, etc.; dosage regimens of important drugs; drug administration techniques in different species of animals-oral, parenteral, rectal, intra-peritoneal and intra-uterine; identification of major livestock or poultry breeds; measuring climatic parameters and their interpretation; communication technology tools.
  - Details of day to day work, posting and duration needs to be worked out by the Veterinary Institution as per its needs and infrastructure facilities and the activities of trainees shall be regulated by the Veterinary Training Institute.

### **Evaluation of Compulsory Rotatory Field Training**

The assessment of each trainees shall be based upon the evaluation of log book or project report, his or her performance reports from all the minimum prescribed training postings, entrepreneurial output, clinical case reports and their presentation, viva and comprehensive examination in core competence skills through a written test by an Evaluation Committee appointed by ARDD for this purpose and the distribution of marks for various components of assessment shall be as under, namely:-

Log book or Project Report:

Performance in different postings:

Entrepreneurial output:

Case Reports or Presentation:

Written test:

Viva:

Total:

10 marks

20 marks

10 marks

10 marks

10 marks

The minimum pass marks in compulsory rotator field training assessment shall be 40 out of 100.

### Trainer Prerequisites for Minor Veterinary Services Training Course

1 **Description** Trainer is responsible for educating the

trainees -

2 Personal Attributes Trainer should be Subject Matter Expert.

He/ she should have good communication,

leadership, observation and practical

oriented skills.

3 Minimum Educational Qualifications

B. V. Sc & A.H

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N.B: This is a Tentative Course Curriculum, Department may modify its as per necessity.

(Dr. N. K Chanchal, IFS)

Director

Animal Resources Development Department