

**DEPARTMENT OF ANIMAL NUTRITION  
SHOURABH COLLEGE OF VETERINARY SCIENCE**

Kheda, Hindaun City, Rajasthan

**LECTURE SCHEDULE – THEORY**

**Second Professional B.V.Sc. & A.H.**

**Credit Hrs. (3+1)**

**w.e.f. 16/10/2024**

**Theory**

**Lecture Duration: One  
hour**

**Name of teachers:** Dr Omprakash Nagar, Dr Shubham Dadarao Nagre and Dr Sriramurthy Kotikalapodi,

**UNIT – 1 (Principles of Animal Nutrition and Feed Technology)**

<b>S.No.</b>	<b>Date</b>	<b>Topics</b>
1.	21.10.2024	History of Animal Nutrition.
2.	22.10.2024	Importance of nutrients in animal production and health.
3.	23.10.2024	Composition of animal body and plants
4.	05.11.2024	Nutritional terms and their definitions
5.	06.11.2024	Nutritional aspects of carbohydrates, Protein, Fat
6.	11.11.2024	Role and requirements of water, metabolic water
7.	12.11.2024	Importance of minerals (major and trace elements) and vitamins in health and production, their requirements and supplementation in feed.
8.	13.11.2024	Common feeds and fodders, their classification, availability and importance for livestock
9.	18.11.2024	Common feeds and fodders, their classification, availability and importance for poultry production.
10.	19.11.2024	Measures of food energy and their applications
11.	20.11.2024	Gross energy, digestible energy, metabolizable energy, net energy, total digestible nutrients.
12.	25.11.2024	Starch equivalent, food units, physiological fuel value
13.	26.11.2024	Direct and indirect calorimetry,
14.	27.11.2024	Carbon and nitrogen balance studies.
15.	02.12.2024	Protein evaluation of feeds - Measures of protein quality in ruminants.
16.	03.12.2024	Protein evaluation of feeds - Measures of protein quality in non-ruminants
17.	04.12.2024	Biological value of protein,
18.	05.12.2024	Protein efficiency ratio.
19.	09.12.2024	Protein equivalent
20.	10.12.2024	Digestible crude protein
21.	11.12.2024	Calorie protein ratio.
22.	16.12.2024	Nutritive ratio.
23.	17.12.2024	Introduction to feed technology

24.	18.12.2024	Introduction to Feed industry
25.	23.12.2024	Processing of concentrates
26.	24.12.2024	Processing of roughages.
27.	30.12.2024	Various physical, chemical and biological methods for improving the nutritive value of inferior quality roughages.
28.	31.12.2024	Preparation, storage and conservation of livestock feed through silage
29.	01.01.2025	Preparation, storage and conservation of livestock feed through hay
30.	07.01.2025	Uses of Silages and Hay in livestock feeding.
31.	08.01.2025	Harmful natural constituents and common adulterants of feeds and fodders.
32.	13.01.2025	Feed additives in the rations of livestock
33.	15.01.2025	Feed additives in the rations of poultry
34.	20.01.2025	Uses of feed additives

### **UNIT – 2 (APPLIED RUMINANT NUTRITION – I)**

S.No.	Date	Topics
35.	21.01.2025	&Importance of Scientific feeding
36.	22.01.2025	Feeding experiments, different methods of feeding experiments.
37.	27.01.2025	Feeding experiments, different methods of feeding experiments.
38.	28.01.2025	Digestion & metabolism trials, norms adopted in digestion trial.
39.	29.01.2025	Measurement of digestibility by conventional methods.
40.	03.02.2025	Measurement of digestibility by Indicator method
41.	05.02.2025	Determining pasture consumption & its digestibility.
42.	10.02.2025	Factors affecting digestibility of feed.
43.	11.02.2025	Feeding standards and its classification.
44.	12.02.2025	Uses, significance, merits and demerits of various feeding standards with reference to ruminants.
45.	17.02.2025	Balanced ration & its characteristics.

### **UNIT – 3 (APPLIED RUMINANT NUTRITION – II)**

S.No.	Date	Topics
46.	18.02.2025	Nutrient requirements and methods for assessing the energy and protein requirements for maintenance and production in terms of growth
47.	19.02.2025	Nutrient requirements and methods for assessing the energy and protein requirements for maintenance and production in terms of reproduction
48.	24.02.2025	Nutrient requirements and methods for assessing the energy and protein requirements for maintenance and production in terms of milk
49.	25.02.2025	Nutrient requirements and methods for assessing the energy and protein requirements for maintenance and production in terms of meat

50.	03.03.2025	Nutrient requirements and methods for assessing the energy and protein requirements for maintenance and production in terms of wool
51.	04.03.2025	Nutrient requirements and methods for assessing the energy and protein requirements for maintenance and production in terms of draft purpose
52.	05.03.2025	General principles of computation of rations.
53.	10.03.2025	Formulation of rations and feeding of dairy cattle during different phases of growth.
54.	11.03.2025	Formulation of rations and feeding of dairy cattle during production (neonate, young, adult, pregnant, lactating and dry animals; breeding bull)
55.	12.03.2025	Formulation of rations and feeding of buffaloes during different phases of growth.
56.	17.03.2025	Formulation of rations and feeding of buffaloes during production (neonate, young, adult, pregnant, lactating and dry animals)
57.	18.03.2025	Formulation of rations and feeding of working animals
58.	19.03.2025	Formulation of ration and feeding of sheep during different phases of growth
59.	24.03.2025	Formulation of ration and feeding of sheep during production (milk, meat and wool).
60.	25.03.2025	Formulation of ration and feeding of goat during different phases of growth
61.	01.04.2025	Formulation of ration and feeding of goat during production (milk, meat)
62.	02.04.2025	Feeding of high yielding animals
63.	07.04.2025	Role of bypass nutrients.
64.	08.04.2025	Metabolic disorders and nutritional interventions.
65.	09.04.2025	Use of NPN compound for ruminants.

#### **UNIT – 4 (APPLIED NON-RUMINANT NUTRITION)**

<b>S.No.</b>	<b>Date</b>	<b>Topics</b>
66.	15.04.2025	Energy requirement for maintenance in poultry
67.	16.04.2025	Energy requirement for maintenance in swine
68.	21.04.2025	Energy requirement for maintenance in equine
69.	22.04.2025	Energy requirement for production in poultry
70.	23.04.2025	Energy requirement for production in swine
71.	28.04.2025	Energy requirement for production in equine
72.	30.04.2025	Protein requirement for maintenance in poultry
73.	05.05.2025	Protein requirement for maintenance in swine
74.	06.05.2025	Protein requirement for maintenance in equine
75.	07.05.2025	Protein requirement for production in poultry
76.	12.05.2025	Protein requirement for production in swine
77.	13.05.2025	Protein requirement for production in equine
78.	14.05.2025	Methods adopted for arriving at energy requirements for maintenance
79.	19.05.2025	Methods adopted for arriving at energy requirements in terms of growth, reproduction

80.	20.05.2025	Methods adopted for arriving at energy requirements in terms of production (egg, meat and work).
81.	21.05.2025	Methods adopted for arriving at protein requirements for maintenance
82.	26.05.2025	Methods adopted for arriving at protein requirements in terms of growth, reproduction
83.	27.05.2025	Methods adopted for arriving at protein requirements in terms of production (egg, meat and work).
84.	28.05.2025	Feeding standards for non-ruminants
85.	02.06.2025	Feeding standards for poultry
86.	03.06.2025	Formulation of rations as per Bureau of Indian Standards
87.	04.06.2025	Formulation of rations as per Indian Council of Agricultural Research specifications
88.	09.06.2025	Feeding of swine (Piglets, Growers, Lactating and pregnant sows, Breeding boar, Fattening animals) with conventional feed ingredients.
89.	10.06.2025	Feeding of swine (Piglets, Growers, Lactating and pregnant sows, Breeding boar, Fattening animals) with unconventional feed ingredients.
90.	11.06.2025	Feeding of equine (foal, yearling, broodmare, stallion and race horses) with conventional feed ingredients.
91.	16.06.2025	Feeding of equine (foal, yearling, broodmare, stallion and race horses) with unconventional feed ingredients.
92.	17.06.2025	Feeding of poultry (Starter, Growers, Broilers) with conventional feed ingredients.
93.	18.06.2025	Feeding of poultry (Starter, Growers, Broilers, Layers) with unconventional feed ingredients.
94.	23.06.2025	Feeding of poultry (Layers) with conventional and unconventional feed ingredients.
95.	24.06.2025	Feeding of ducks
96.	25.06.2025	Feeding of quails
97.	30.06.2025	Feeding of turkeys
98.	01.07.2025	Feeding of laboratory animals.
99.	02.07.2025	Nutrient requirements of mice, rat.
100.	07.07.2025	Nutrient requirements of rabbit and guinea pig.
101.	08.07.2025	Diet formulation, preparation and feeding of rabbits and laboratory animals.
102.	09.07.2025	Nutrient requirement and feeding of different categories of dogs and cats;
103.	14.07.2025	Nutrient requirement and feeding of different categories of cats; peculiarities of feeding cats.
104.	15.07.2025	Feeding of wild animals and birds in captivity.
105.	16.07.2025	Metabolic disorders and nutritional intervention.
106.	21.07.2025	Revision
107.	22.07.2025	Revision
108.	23.07.2025	Revision
109.	28.07.2025	Revision
110.	29.07.2025	Revision
111.	30.07.2025	Revision

112.	04.08.2025	Revision
113.	05.08.2025	Revision
114.	06.08.2025	Revision
115.	11.08.2025	Revision
116.	12.08.2025	Revision
117.	13.08.2025	Revision
118.	18.08.2025	Revision
119.	19.08.2025	Revision
120.	20.08.2025	Revision
121.	25.08.2025	Revision
122.	26.08.2025	Revision
123.	27.08.2025	Revision
124.	01.09.2025	Revision
125.	03.09.2025	Revision
126.	08.09.2025	Revision
127.	09.09.2025	Revision
128.	10.09.2025	Revision
129.	15.09.2025	Revision
130.	16.09.2025	Revision

**DEPARTMENT OF ANIMAL NUTRITION  
SHOURABH COLLEGE OF VETERINARY SCIENCE**

Kheda, Hindaun City, Rajasthan

**LECTURE SCHEDULE – PRACTICAL**

**Second Professional B.V.Sc. & A.H.**

**Credit Hrs. (3+1)**

**w.e.f. 16/10/2024**

**Practical**

**Lecture Duration: Two hours**

**Name of teachers:** Dr Omprakash Nagar, Dr Shubham Dadarao Nagre and Dr Sriramurthy Kotikalapodi

**UNIT – 1 (Principles of Animal Nutrition and Feed Technology)**

<b>S.No.</b>	<b>Date</b>	<b>Topics</b>
1.	C batch – 17.10.2024 A batch – 18.10.2024 B batch – 19.10.2024	General precautions while working in nutrition laboratories.
2.	C batch – 07.11.2024 A batch – 08.11.2024 B batch – 09.11.2024	Familiarization of various feed stuff and fodders. Preparation and processing of samples for chemical analysis-herbage, faeces, urine, and silages.
3.	C batch – 14.11.2024 A batch – 22.11.2024 B batch – 16.11.2024	Preparation of solutions, Weende System of analysis
4.	C batch – 21.11.2024 A batch – 22.11.2024 B batch – 23.11.2024	Estimation of dry matter in feed samples.
5.	C batch – 28.11.2024 A batch – 29.11.2024 B batch – 30.11.2024	Estimation of total ash in feed samples.
6.	C batch – 05.12.2024 A batch – 06.12.2024 B batch – 07.12.2024	Estimation of acid-insoluble ash in feed samples.
7.	C batch – 12.12.2024 A batch – 13.12.2024 B batch – 14.12.2024	Estimation of crude protein in feed samples.
8.	C batch – 19.12.2024 A batch – 20.12.2024 B batch – 21.12.2024	Estimation of ether extract in feed samples.

9.	C batch – 26.12.2024 A batch – 27.12.2024 B batch – 28.12.2024	Estimation of crude fibre and calculation of nitrogen free extract in feed samples.
10.	C batch – 02.01.2025 A batch – 03.01.2025 B batch – 04.01.2025	Estimation of calcium in feed samples.
11.	C batch – 02.01.2025 A batch – 10.01.2025 B batch – 11.01.2025	Estimation of phosphorus in feed samples.
12.	C batch – 16.01.2025 A batch – 17.01.2025 B batch – 18.01.2025	Demonstration of detergent method of forage analysis.
13.	C batch – 23.01.2025 A batch – 24.01.2025 B batch – 25.01.2025	Qualitative detection of undesirable constituents and common adulterants of feed.

### **UNIT – 2 (APPLIED RUMINANT NUTRITION – I)**

S.No.	Date	Topics
14.	C batch – 30.01.2025 A batch – 31.01.2025 B batch – 01.02.2025	Calculation of nutritive value different feed stuffs in terms of digestible crude proteins (DCP)
15.	C batch – 06.02.2025 A batch – 07.02.2025 B batch – 08.02.2025	Calculation of nutritive value different feed stuffs in terms of total digestible nutrient (TDN)
16.	C batch – 13.02.2025 A batch – 14.02.2025 B batch – 15.02.2025	Nutrient ratio (NR)
17.	C batch – 20.02.2025 A batch – 21.02.2025 B batch – 22.02.2025	Balance of nutrients

### **UNIT – 3 (APPLIED RUMINANT NUTRITION – II)**

18.	C batch – 27.02.2025 A batch – 28.02.2025 B batch – 01.03.2025	Calculation of requirements of nutrients in terms of DCP for maintenance.
19.	C batch – 06.03.2025 A batch – 07.03.2025 B batch – 08.03.2025	Calculation of requirements of nutrients in terms of DCP for growth.
20.	C batch – 20.03.2025 A batch – 21.03.2025 B batch – 22.03.2025	Calculation of requirements of nutrients in terms of DCP for other types of production like meat, milk, wool.
21.	C batch – 27.03.2025 A batch – 28.03.2025 B batch – 29.03.2025	Calculation of requirements of nutrients in terms of DCP, TDN and metabolisable energy (ME) for reproduction.

22.	C batch – 03.04.2025 A batch – 04.04.2025 B batch – 05.05.2025	Calculation of requirements of nutrients in terms of DCP, TDN and metabolisable energy (ME) for draft purpose.
23.	C batch – 17.04.2025 A batch – 25.04.2025 B batch – 19.04.2025	Formulation of rations for feeding of livestock during scarcity periods.
24.	C batch – 24.04.2025 A batch – 02.05.2025 B batch – 26.04.2025	Visit to Animal Farm.
25.	C batch – 01.05.2025 A batch – 09.05.2025 B batch – 03.05.2025	Visit to Feed Mill.

#### **UNIT – 4 (APPLIED NON-RUMINANT NUTRITION)**

26.	C batch – 08.05.2025 A batch – 16.05.2025 B batch – 10.05.2025	Calculation of requirements of nutrients for growth, reproduction, and other types of production like egg
27.	C batch – 15.05.2025 A batch – 23.05.2025 B batch – 17.05.2025	Calculation of requirements of nutrients for growth, reproduction.
28.	C batch – 22.05.2025 A batch – 30.05.2025 B batch – 24.05.2025	Calculation of requirements of nutrients for other types of production like meat
29.	C batch – 05.06.2025 A batch – 06.06.2025 B batch – 31.05.2025	Principles of compounding and mixing of feeds
30.	C batch – 12.06.2025 A batch – 13.06.2025 B batch – 14.06.2025	Visit to farms
31.	C batch – 19.06.2025 A batch – 20.06.2025 B batch – 21.06.2025	Formulation of balance diets for horses
32.	C batch – 26.06.2025 A batch – 27.06.2025 B batch – 28.06.2025	Formulation of balance diets for dogs
33.	C batch – 03.07.2025 A batch – 04.07.2025 B batch – 05.07.2025	Formulation of balance diets for cats
34.	C batch – 10.07.2025 A batch – 11.07.2025 B batch – 12.07.2025	Feeds and feeding schedule of zoo animals
35.	C batch – 17.07.2025 A batch – 18.07.2025 B batch – 19.07.2025	Birds-diet charts
36.	C batch – 24.07.2025 A batch – 25.07.2025 B batch – 26.07.2025	Revision
37.	C batch – 31.07.2025 A batch – 01.08.2025 B batch – 02.08.2025	Revision

38.	C batch – 07.08.2025 A batch – 08.08.2025 B batch – 09.08.2025	Revision
39.	C batch – 21.08.2025 A batch – 22.08.2025 B batch – 23.08.2025	Revision
40.	C batch – 28.08.2025 A batch – 29.08.2025 B batch – 30.08.2025	Revision
41.	C batch – 04.09.2025 A batch – 12.09.2025 B batch – 06.09.2025	Revision
42.	C batch – 11.09.2025 A batch – 09.09.2025 B batch – 13.09.2025	Revision