**Course Code** : ANU 201
**Course Title** : Animal Nutrition and Feeding Practice
**Credit Hours** : 3 (2+1)    **Full Marks: 75**    **Theory: 50**    **Practical: 25**

**OBJECTIVES**

Upon the completion of this course, the students will be able to know functions, deficiency symptoms of nutrients and feeding of farm animals.

**I. SYLLABUS**

Terminology of animal nutrition, feedstuffs classification, comparative composition of plants and animals cells and tissues. Classification, functions and deficiency symptoms of carbohydrates, protein, lipids, minerals and vitamins. Digestion, absorption and metabolism of nutrients in ruminants and non-ruminants. Importance of proximate analysis, feeding standards and nutrient requirements for different farm animals and poultry .Feeding of cattle, buffalos, sheep, goats and poultry

**II. COURSE OULINE**

**A. Lecture**

**A. Theory**

| S.No. | Topic | No. of Lectures |
|-------|-------|-----------------|
| 1. | Introduction, importance and terminology of animal nutrition | 1 |
| 2. | Feedstuffs classification | 1 |
| 3. | Comparative composition of plant and animals cells and tissues | 2 |
| 4. | Classification, functions and deficiency systems of carbohydrates | 2 |
| 5. | Classification, functions and deficiency systems of protein | 2 |
| 6. | Classification, functions and deficiency systems of lipids | 1 |
| 7. | Classification, functions and deficiency systems of minerals | 3 |
| 8. | Classification, functions and deficiency systems of vitamins | 2 |
| 9. | Digestion of carbohydrates in ruminant and non-ruminant | 2 |
| 10. | Digestion of protein in ruminant and non-ruminant | 2 |
| 11. | Digestion of lipids in ruminant and non-ruminant | 2 |
| 12. | Metabolism and absorption of nutrients | 3 |
| 13. | Importance and method of proximate analysis | 1 |
| 14. | Feeding standards for cattle, buffalo, sheep and goats | 2 |
| 15. | Feeding standard for swine and poultry | 1 |
| 16. | Feeding of large ruminants (cattle and buffalo) | 1 |
| 17. | Feeding of small ruminants (sheep and goats) | 1 |
| 18. | Feeding of swine and poultry | 1 |
| **Total** | | **30** |

**B. Practical**

| S.N. | Topic | No of practicals |
|---|---|---|
| 1. | Identification of feed ingredients | 1 |
| 2. | Sampling of feed ingredients for chemical analysis | 1 |
| 3. | Preparation of standard solution for proximate analysis | 2 |
| 4. | Proximate analysis of feeds and common fodder | 2 |
| 5. | Determination of crude protein | 2 |
| 6. | Determination of NDF and ADF | 2 |
| 7. | Computation of feeds for cattle and buffalo | 1 |
| 8. | Computation of feeds for sheep and goats | 1 |
| 9. | Computation of feeds for swine | 1 |
| 10. | Computation of feeds for poultry (broiler and layers) | 2 |
| | **Total** | **15** |

**REFERENCES**

Banarjee, G.C. 1986. A Text Book of Animals Nutrition, Published by Mohar Primlani, Oxford and IBH Publishing CO. Pvt. Ltd.

National Research Council (NRC, 2011), Nutrient requirements of Dairy Cattle, Published Washington D.C.

National Research Council, (NRC, 2011) Nutrient requirements of poultry, Published Washington D.C.

National Research Council, (NRC,2011), Nutrients requirements of swine Published Washington D.C.

National Research Council, (NRC, 2011), Nutrient requirements of sheep and goats. Published Washington, D.C.