



# UNIVERSITY OF JAMMU

(NAAC ACCREDITED 'A' GRADE' UNIVERSITY)  
(Baba Sahib Ambedkar Road, Jammu-180006 (J&K))

Academic Section

Email: [academicsectionju14@gmail.com](mailto:academicsectionju14@gmail.com)

## NOTIFICATION (24/Aug./Adp./64)

It is hereby notified for the information of all concerned that the Vice-Chancellor, in anticipation of the approval of the Academic Council, is pleased to authorize the adoption of the Syllabi and Courses of Studies of the subject of **B.Sc. Veterinary Technology** of Semester I for **Four Year Under Graduate Programme (FYUGP)** as per NEP-2020 (as given in the annexure) for the examinations to be held in the years **December 2024, 2025 and 2026.**

The Syllabi of the courses is also available on the University website: [www.jammuuniversity.ac.in](http://www.jammuuniversity.ac.in).

Sd/-  
DEAN ACADEMIC AFFAIRS

No. F. Acd/II/24/ 8844-58

Dated: 16/8/24

Copy for information and necessary action to:

1. Dean Faculty of Life- Science
2. Sr. P.A.to the Controller of Examinations
3. All members of the Board of Studies
4. Confidential Assistant to the Controller of Examinations
5. I/C Director, Computer Centre, University of Jammu
6. Deputy Registrar/Asst. Registrar (Conf. /Exams. UG/CDU)
7. Incharge, University Website for Uploading of the notification

*Sumitashams*  
Deputy Registrar (Academic)  
16/8/24 16/8/24

# ANNEXURE-1a

**University of Jammu**  
**Course Scheme of Syllabus**  
**Bachelor of Veterinary Technology (General/Honors/Honors with Research)**  
**(As per the Guidelines of National Education Policy-2020)**

S No	Course Type	Course No.	Course Title	Credits	Marks				Total marks
					Theory		Practical		
					Mid Semester	End Exam	Assessment	Exam	
1.	Major	UMJVTT101	Live stock and its importance	4(3T+1P)	15	60	10	15	100
2.	Minor	UMIVTT102	Concept of extension education	4(3T+1P)	15	60	10	15	100
3.	MDC	UMDVTT103	Dairy Farming	3	15	60	NA	NA	75
4.	SEC	USEVTT104	Introduction To Poultry Sciences	2	5	40	NA	5	50



## University of Jammu

Syllabi of Veterinary Technology for FYUGP under CBCS as per NEP-2020

### SEMESTER-I

(Examination to be held in December 2024, 2025 & 2026)

#### Major Course

Course Code: UMJVTT101  
Credits: 04{03(Theory) + 01(Practical)}

Course Title: Livestock and its importance  
Total no. of lectures: Theory: 45 hours  
Practical: 30 hours

Maximum Marks: 100  
Theory: 75  
Practical/Tutorial: 25

#### Minor Course

Course Code: UMIVTT102  
Credits: 04{03(Theory) + 01(Practical)}

Course Title: Concept of extension education  
Total no. of lectures: Theory: 45 hours  
Practical: 30 hours

Maximum Marks: 100  
Theory: 75  
Practical/Tutorial: 25

#### Multidisciplinary Course

Course Code: UMDVTT103  
Credits: 03  
Maximum Marks: 75  
Theory: 75

Course Title: Dairy farming  
Total no. of lectures: Theory: 45 hours

#### Skill Enhancement Course

Course Code: USEVTT104

Course Title: Introduction to Poultry Sciences

Credits: 02

Total no. of lectures: Theory/Practical: 45 hours  
(15 hours)/(30 hours)

Maximum Marks: 50  
Theory/Practical: 50

**UNIVERSITY OF JAMMU**  
**SYLLABI AND COURSE OF STUDY IN VETERINARY TECHNOLOGY**  
**UNDER CBCS AS PER NEP - 2020**  
**(For the Examination to be held in Year 2024, 2025 & 2026)**  
**(MAJOR COURSE)**  
**UG SEMESTER-I**

MAJOR CORE COURSE NO.	:	UMJVTT101
MAJOR CORE COURSE TITLE	:	LIVESTOCK AND ITS IMPORTANCE
CREDITS	:	04 {03 (Theory) + 01 (Practical)}
MAXIMUM MARKS	:	75
I) External (University Exam)	:	60
II) Internal Assessment	:	15
DURATION OF UNIVERSITY EXAM	:	03 Hours
MAXIMUM MARKS PRACTICALS	:	25
I) Continuous assessment	:	10
II) Final examination	:	15

The course is designed to familiarize the students with the livestock sector in general, common managerial practices, social and economic importance, housing requirements, germplasm and their conservation

**Unit 1: Introduction to Livestock Sector**

**(12 hours)**

- 1.1 Demographic Distribution of Livestock and Their Role In Indian Economy, Problem And Prospects of Livestock Industry In India, National And International Research Institutes Involved In Conservation of Livestock Germplasm.
- 1.2 Common Animal Husbandry Terms
- 1.3 Livestock Farm Management Practices (Disinfection, Isolation, Quarantine and Disposal of Carcass), Transportation of Livestock.
- 1.4 Common Diseases of Livestock and Their Prevention

**Unit 2: Climate Resilient Livestock Housing**

**(10 hours)**

- 2.1 Livestock housing systems, layout and design of different animal building, Selection of site for livestock farming
- 2.2 Space requirement for different categories of animal
- 2.3 Milking and types of milk parlour, Evolution of Dairy Sector In India
- 2.4 Cleaning and disinfection of livestock houses

**Unit 3: Scientific Feeding Of Livestock**

**(12 hours)**

- 3.1 Agro-climatic zones of India
- 3.2 Common feeds and fodder, their classification, availability and importance for livestock and poultry production; Thumb rule for feeding of livestock
- 3.3 Preservation of fodder; Antinutrition factors in livestock feed/fodder
- 3.4 Nutritional deficiencies in livestock and their effects; Animal feed supplements/additives.

**Unit 4: Conservation Of Livestock Germplasm**

(11 hours)

- 4.1 Indian breeds of livestock and their identifying features (cattle, buffalo, sheep, goat, poultry, pig, camel, horse, donkey)
- 4.2 Exotic breeds of economic importance.
- 4.3 Selection and their types(individual, progeny, sib); Mating system and their classification
- 4.4 Artificial insemination and its importance

**PRACTICUM:**

(30 hours)

- a. Visit to dairy farm
- b. Visit to poultry farm
- c. Visit to goat farm
- d. Visit to sheep farm
- e. Visit to semen collection station and artificial insemination
- f. Machine milking and management
- g. Different types of knots
- h. Calf management
- i. Grading of dairy animals
- j. Different feed and fodder for dairy animals
- k. Antinutritional factors in feed and fodder

**NOTE FOR PAPER SETTING**

Examination Theory/Practical	Syllabus to be covered in Examination	Time allotted for Exam	Marks
Internal Theory Assessment	50%	1 Hr & 30 Minutes	15
External Theory End Semester	100%	3 Hrs	60
Continuous assessment	-	-	10 (Based on Daily Performance only)
Final Examination	-	-	15

**External End Semester Theory Examination will have two sections (A & B) {Total marks 60}**

*Section A : Four short answer questions representing all units/syllabi i.e., one question from each unit. Each question shall be of 3 marks.*

*Section B: Eight long answer questions (Four to be attempted) representing whole of the syllabi i.e., two questions from each unit. Each question shall be of 12 marks.*



***Internal Assessment {Total marks 15}***

*Fifteen (15) marks for theory paper in a subject reserved for internal assessment shall have one long answer type question of 7 marks and four short answer type questions of 2 marks each.*

**SUGGESTED READINGS**

1. A Textbook of Animal Husbandry By G. C Banerji
2. A Textbook of Animal Husbandry and Dairying By V.T.SubbiahMudaliar.
3. Handbook of Animal Husbandry published by ICAR.
4. Livestock Production Management by Sastry and Thomas.
5. Textbook of Animal breeding by S .S. Tomar.
6. Milch cows and Dairy Farming by Charles L. Flint.
7. Dairy farming by Indian council of Agricultural Research.
8. The Complete Guide to Backyard Dairy Farming by James .B Mike.
9. Current concepts in Bovine Reproduction by Kumaresan.
10. Reproductive Technologies in Animals by Giorgio Presicce



**UNIVERSITY OF JAMMU**  
**SYLLABI AND COURSE OF STUDY IN VETERINARY TECHNOLOGY**  
**UNDER CBCS AS PER NEP - 2020**  
**(For the Examination to be held in Year 2024, 2025 & 2026)**  
**(MINOR COURSE)**  
**UG SEMESTER-I**

MINOR CORE COURSE NO.	:	UMIVTT102
MINOR CORE COURSE TITLE	:	CONCEPTS OF EXTENSION EDUCATION
CREDITS	:	04 {03 (THEORY) + 01 (Practical)}
MAXIMUM MARKS	:	75
I) External (University Exam)	:	60
II) Internal Assessment	:	15
DURATION OF UNIVERSITY EXAM	:	03Hours
MAXIMUM MARKS PRACTICALS	:	25
I) Continuous Assessment	:	10
II) Final Examination	:	15

The course is designed to familiarize the students with the aspects of extension education, sociology, rural development, livestock economics and communication.

**Unit1: Evolution of Livestock Based Livelihoods (10 hours)**

- 1.1 Relationship between agriculture and animal husbandry
- 1.2 Farming and characteristics of farming in India
- 1.3 Types of farming
- 1.4 Role of animals in contemporary society

**Unit:2 Extension Education Development (10 hours)**

- 2.1 Early extension efforts in India
- 2.2 Types of education-formal, informal and non-formal
- 2.3 Extension education:concepts, levels, objectives and dimensions.
- 2.4 Rural development and its programmes

**Unit:3 Livestock Development Through Technological Interventions (15 hours)**

- 3.1 Cattle and buffalo improvement programmes: Key village scheme, Intensive cattle development project (ICDP),Gosadan and goshala, Dairy development programmes.
- 3.2 AMUL pattern of dairy cooperative systems and operation flood
- 3.3 Transfer of technology projects of ICAR:-Krishi Vigyan kendra(KVKs)
- 3.4 Different ongoing central and state govt. animal husbandry development programmes being run related to sheep, goat, poultry, piggery and fodder production.

**Unit:4:Communication And Extension Teaching Methods (10 hours)**

- 4.1 Teaching methods
- 4.2 Communication and its function-basic concept; Types and elements of communication
- 4.3 Contact methods; Individual, Mass, Group
- 4.4 Selection and use of extension teaching method

**PRACTICUM: (30 hours)**

- a. Tools of data collection
- b. Social survey conduction
- c. Village visit
- d. Familiarization with audio-visual aids
- e. Planning and organizing awareness camps on animal health
- f. Planning and organization of group discussion
- g. Preparation of dairy entrepreneurship project

**NOTE FOR PAPER SETTING**

Examination Theory/Practical	Syllabus to be Covered in Examination	Time allotted for Exam	Marks
Internal Theory Assessment	50%	1Hr& 30 Minutes	15
External Theory End Semester	100%	3Hrs	60
Continuous assessment	-	-	10 (Based on Daily Performance only)
Final Examination	-	-	15

**External End Semester Theory Examination will have two sections (A&B) {Total marks: 60}**

Section A : Four short answer questions representing all units/syllabi i.e., one question from each unit. Each question shall be of 3 marks.

Section B: Eight long answer questions (Four to be attempted) representing whole of the syllabi i.e., two questions from each unit. Each question shall be of 12 marks.

**Internal Assessment {Total marks 15}**

Fifteen (15) marks for theory paper in a subject reserved for internal assessment shall have one long answer type question of 7 marks and four short answer type questions of 2 marks each.

**SUGGESTED Readings:**

1. Extension Communication and Management by G.L.Ray.
2. Textbook on Veterinary and Animal Husbandry Extension Education by A. Goswami and S. Biswas.
3. Textbook of Animal Husbandry: Extension Education by P. Mathialagan.
4. Practical Aspects in Veterinary Extension & Animal Husbandry by Ruchi Singh.
5. Extension Techniques for Livestock Development by Chitranjan Sharma.





**UNIVERSITY OF JAMMU**  
**SYLLABI AND COURSE OF STUDY IN VETERINARY**  
**TECHNOLOGY UNDER CBCS AS PER NEP - 2020**  
**(For the Examination to be held in Year 2024, 2025 & 2026)**  
**(MULTIDISCIPLINARY COURSE)**  
**UG SEMESTER-I**

<b>MULTIDISCIPLINARY COURSE NO.</b>	<b>:</b>	<b>UMDVTT103</b>
<b>MULTIDISCIPLINARY COURSE TITLE</b>	<b>:</b>	<b>DAIRY FARMING</b>
<b>CREDITS</b>	<b>:</b>	<b>03</b>
<b>MAXIMUM MARKS</b>	<b>:</b>	<b>75</b>
<b>I) External (University Exam)</b>	<b>:</b>	<b>60</b>
<b>II) Internal Assessment</b>	<b>:</b>	<b>15</b>
<b>TIME DURATION</b>	<b>:</b>	<b>03 Hours</b>

The course is designed to introduce students with various dairy breeds, their traits of economic importance, breeding methods for improving germplasm, various farm managerial practices for optimum production, feeding, ration formulation, milking, housing

**Unit 1: Introduction to Dairy breeds and Lactation** **(10 hours)**

- 1.1 Classification of breeds of Indian cattle, exotic breeds of cattle, Indigenous Buffalo breeds and their important traits, Milch Goat breeds.
- 1.2 Lactation, Milk Biosynthesis, Milk Precursors, Milk let down, common terms related to mammary gland and lactation.
- 1.3 Milk and its composition, properties of milk, factors effecting yield and composition of milk.
- 1.4 Milking of cow and its types. Machine milking and function of its parts.

**Unit 2 : Dairy Nutrition** **(15 hours)**

- 2.1 Composition and classification of feed stuffs, Roughages, Concentrates.
- 2.2 Livestock feeds in India viz: Animal protein source, Vegetable protein source, Energy source and other miscellaneous.
- 2.3 Balanced Ration and its characteristics. Ration formulation for cattle and buffalo.
- 2.4 Feeding cattle and buffalo by thumb rule, use of urea as a protein replacer.

**Unit 3: Artificial insemination(AI)** **(10 hours)**

- 3.1 Define Artificial insemination(AI). Its merits and demerits. Problems under Indian conditions,
- 3.2 Define semen. Components of semen and their functions; Characteristics of semen of different species; Methods of semen collection. Dilution of semen and function of common extender ingredients.



3.3 Examination and Evaluation of semen viz- Macroscopic tests, Microscopic tests and Chemical tests.

3.4 Preservation of semen viz: At ambient temperature, deep freezing temperature. Factors affecting the survival of spermatozoa.

**Unit 4: Dairy farm Management**

**(10 hours)**

4.1 Care of cow during and after parturition.

4.2 Calf management viz., Colostrum feeding and its advantages, Disbudding, weaning, vaccination etc;

Housing of dairy animals viz loose and conventional dairy barn.

4.3 Records keeping in dairy farm and its importance.

4.4 Disinfection of animal sheds and common disinfectants.

**NOTE FOR PAPER SETTING**

Examination	Syllabus to be	Time allotted for	Marks
Theory/Practical	Covered in Examination	Exam	
Internal Theory Assessment	50%	1Hr& 30 Minutes	15
External Theory End Semester	100%	3Hrs	60

**External End Semester Theory Examination will have two sections (A&B) {Total marks 60}**

Section A : Four short answer questions representing all units/syllabi i.e., one question from each unit. Each question shall be of 3 marks.

Section B: Eight long answer questions (Four to be attempted) representing whole of the syllabi i.e., two questions from each unit. Each question shall be of 12 marks.

**Internal Assessment {Total marks 15}**

Fifteen (15) marks for theory paper in a subject reserved for internal assessment shall have one long answer type question of 7 marks and four short answer type questions of 2 marks each.

**SUGGESTED Readings:**

1. A Textbook of Animal Husbandry By G. C Banerji
2. A Textbook of Animal Husbandry and Dairying By V.T.SubbiahMudaliar.
3. Handbook of Animal Husbandry published by ICAR.
4. Veterinary Andrology and Artificial Insemination by M.S.Saxena.
5. Current concepts in Bovine Reproduction by Kumaresan



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**TECHNOLOGY UNDER CBCS AS PER NEP - 2020**  
**(For the Examination to be held in Year 2024, 2025 & 2026)**  
**(SKILL ENHANCEMENT COURSE)**  
**UG SEMESTER-I**

<b>SKILL ENHANCEMENT COURSE NO.</b>	<b>:</b>	<b>USEVTT104</b>
<b>SKILL ENHANCEMENT COURSE TITLE</b>	<b>:</b>	<b>INTRODUCTION TO POULTRY SCIENCES</b>
<b>CREDITS</b>	<b>:</b>	<b>02</b>
<b>MAXIMUM MARKS THEORY</b>	<b>:</b>	<b>50</b>
<b>I) External Assessment</b>	<b>:</b>	<b>25</b>
<b>II) Internal Assessment</b>	<b>:</b>	<b>25</b>
<b>DURATION OF UNIVERSITY EXAM</b>	<b>:</b>	<b>02 Hours30Minutes</b>

The course is designed to familiarize the student with poultry and poultry housing, feeding ,nutrient requirement , by-product as feed and their efficient utilization.

**UNIT-1: Introduction to Poultry sciences**

(8 hours)

- 1.1 Classification of Poultry breeds. Indian breeds of poultry. Improved poultry breeds; Common terms related to Poultry-
- 1.2 Feeding systems of Poultry viz: whole grain feeding, grain and mesh feeding, pellet feeding, all mesh feeding, cafeteria feeding, phase feeding, restricted feeding.
- 1.3 Nutrient requirement of poultry. Importance of calorie –protein ratio in poultry feed; Classification of poultry feeds viz energy feed stuffs, protein feed stuffs, fat source, minerals and vitamins.
- 1.4 Methods of computation of balanced poultry ration and steps involves.

**UNIT-2: Poultry housing**

(7 hours)

- 2.1 Selection of site for poultry housing
- 2.2 Systems of housing of poultry birds viz free range, semi-intensive and intensive systems.
- 2.3 Space requirement for poultry under different system. Deep litter system and cage systems of poultry housing.
- 2.4 Brooding and its types. Types of Brooders. Ideal conditions of Brooding.

**UNIT-3: Incubation and Hatching**

(15 hours)

- 3.1 Digestive system of poultry and its demonstration.
- 3.2 Reproductive system of poultry and its demonstration with special reference to formation of egg; Structure and composition of egg; Analysing the quality of egg using various parameters viz: Albumin index, Haugh value, Yolk index etc.
- 3.3 Various production indices of poultry production system viz- Hen day egg production, Hen Housed egg production, Feed conversion ratio etc.

3.4 Incubation and Hatching: Ideal condition for incubation. Factors Affecting hatchability of fertile egg; Various equipments used in poultry farm and their uses.

**NOTE FOR PAPER SETTERS**

Total Marks of the USEVTT-104 is 50 of which 50% marks shall be reserved for internal assessment (25 marks).

Remaining 50% of the marks (25 marks) shall be reserved for external examination to be conducted by the University/Colleges.

Internal Assessment Test (25 Marks) Internal Assessment Paper of 25 Marks shall consist of Theory Question/s of 20 Marks from Unit I/II and 5 Marks of Practical Exercise from Unit III.

External End semester University / College Examination External Theory Exam shall be of 25 Marks and consist of 2 sections:

Section A: Three (3) short answer questions atleast one question from each unit. Each question shall be of 2marks (All Compulsory)

Section B: Three (3) long answer questions: two questions (one from Unit-I and one from Unit-II), each of 6 marks; one question (practical-based/exercise from Unit-III), carrying 7 marks.

**SUGGESTED Readings:**

1. A Textbook of Animal Husbandry By G. C Banerji.
2. Livestock Production Management by Sastry and Thomas
3. Applied Nutrition by D V Reddy
4. Fundamentals of Animal Nutrition by NityaNand Pathak.
5. Poultry Farming and Keeping by W. Powell Owen.
6. The Poultry Science by L.C.R. Norris Elye.
7. Organic Poultry Farming by Opeyemi Afeluyi
8. Modern Poultry Farming by Loius M Hurd.
9. Broiler Business Poultry Training Manual by Wayne Skews.
10. Poultry by G.C.Banerjee.

