

SRI VENKATESWARA UNIVERSITY - TIRUPATI

Dairy Science - MINOR

w.e.f AY 2023-24 onwards

COURSE STRUCTURE

Year	Semester	Course	Title	No. Hrs./Week	No. of Credits
I	II	1	Breeds and breeding of dairy cattle and buffaloes - (T)	3	3
			Breeds and breeding of dairy cattle and buffaloes - (P)	2	1
II	III	2	Dairy Chemistry (Chemistry of fluid milk) - (T)	3	3
			Dairy Chemistry (Chemistry of fluid milk) - (P)	2	1
	IV	3	Processing of milk- (T)	3	3
			Processing of milk- (P)	2	1
		4	Technology of fat- rich dairy products- (T)	3	3
			Technology of fat- rich dairy products- (P)	2	1
III	V	5	Traditional Indian Dairy Products - (T)	3	3
			Traditional Indian Dairy Products- (P)	2	1
		6	Dairy development and Dairy cooperatives. - (T)	3	3
			Dairy development and Dairy cooperatives. - (P)	2	1

V Semester

Course 13: Traditional Indian Dairy Products

Credits -3

Unit-1: Status and significance of traditional Indian milk products in India.

Khoa: Classification of types, standards methods of manufacture and preservation, factors affecting yield of khoa. Khoa based sweets: Burfi, Peda, Milkcake, Kalakhand, Gulabjaman and their compositional profile and manufacture practices.

Unit- 2: (a)Rabri and Basundi: process description, factors affecting yield, physico-chemical changes during manufacture.

(b)Bio-preservative principles in enhancing the self-life of indigenous milk products including active packaging.

Unit- 3: Channa: standards, method of manufacture, packaging and preservation. Chhana-based sweets: Rasogolla, Sandesh, Rasomalai.

Paneer: standards, method of manufacture, packaging and preservation. Mechanization of Paneer manufacturing/packaging process.

Unit- 4: Chakka/Maska and Shrikhand: standards, method of manufacture, small scale and industrial process of production, packaging and preservation aspects.

Unit-5: Misti Dahi: Product description method of manufacture and packaging process. Kheer and Payasam: Product description methods of manufacture, innovations in manufacturing and packaging processes.

V Semester

Course 13: Traditional Indian Dairy Products

Credits -1

1. Preparation of Khoa from cow, buffalo and concentrated milk.
2. Preparation of Burfi, Peda, Kalakand, Milkcake and Gulabjamun.
3. Preparation of Paneer from cow, buffalo and mixed milk.
4. Preparation of Chhana from cow and buffalo milk and mixed milk.
5. Preparation of Sandesh and Rasogolla.
6. Preparation of kheer.
7. Preparation of Rabri, Misti Dahi, Chhaka and Shrikhand.
8. Visit to industry.

REFERENCE BOOKS

1. Outlines of Dairy Technology- Sukumar De
2. Milk, Milk Products and Quality Control- C.P. Anantha Krishnan
3. The Technology of Milk Processing- C.P. Anantha Krishnan

V Semester
Course 14: Dairy Development and Co-operatives
Credits -3

Learning objectives:

1. The student will be able to understand various dairy development programs implemented in India before and after independence.
2. The students will learn the impact of cooperative dairying on the dairy development in India.
3. Students will also learn the status of India in the world in terms of milk production.

Theory

Unit-1 : Advantages of Dairying. Principals involved in successful dairying. Systems of dairy farming-Mixed farming and Specialized dairy farming – organic farming system.

Unit-2: Methods of procurement of milk; Transportation of milk; Pricing of milk, methods of Marketing of milk.

Unit-3: Cooperative Dairying-Structure of Dairy cooperatives- Anand pattern - Primary milk producer's cooperative society; District milk producer's cooperative union; State level dairy development cooperative Federation, objectives and functions - Milk and milk products order MMPO(1992)- Role of private dairies in India.

Unit-4: Dairy development programs implemented in India. Statistical analysis of progress in development of Dairy industry in India, Operation Flood Program., Key village scheme. Quantity of milk produced in India over the past five decades vis-a vis other countries.

Unit-5: Economics of maintaining Dairy farm- Income and expenditure in dairy farms. Estimating the production cost of milk.

V Semester
Course 14: Dairy Development and Co-operatives
Credits -1

Learning outcomes:

After successful completion of the course, both theoretically and practically,

- Students learn about various dairy development programs implemented in India.
- Students will get knowledge about various methods of pricing of milk
- The students will also have knowledge about various methods used for procurement, transport and marketing of milk.

Practicals:

1. Estimation of production cost of milk for 5 animals and 10 animal dairy units.
2. Estimating income and expenditure involved in dairy farming
3. Preparation of project report for different sizes of dairy farms
4. Essentials for setting up of dairy farm

5. On Farm training for one month is suggested and a comprehensive training report should be submitted as mandatory requirement while appearing for semester practical exam which would carry 20 marks out of 50 marks as weightage.

References

1. Text book of Animal Husbandry - G C Benarjee
2. Principles and practices of Dairy Farm –Jagdish Prasad