



CVVM UNIVERSITY

Aegis: Charutar Vidya Mandal (Estd.1945)

FACULTY OF ENGINEERING & TECHNOLOGY

Effective from Academic Batch: 2022-23

Programme: Bachelor of Technology (Dairy Technology)

Semester: VII

Course Code:

Course Title: Dairy Plant Layout and Management

Course Group: Professional Elective Course IV

Course Objectives: Various unit operations are carried out to transform raw milk into value added finished products, employing all sorts of resources like raw ingredients, utilities (water, air, electricity, refrigeration, steam and waste treatment etc.), plant - machinery and human resource. This subject deals with designing the buildings construction, floor, ventilation etc. Management will help in giving insights about production, human resource and safety issues of dairy industry.

Teaching & Examination Scheme:

Contact hours per week			Course Credits	Examination Marks (Maximum / Passing)				
Lecture	Tutorial	Practical		Theory		J/V/P*		Total
				Internal	External	Internal	External	
2	0	0	2	50 / 18	50 / 17	-	-	100 / 35

* J: Jury; V: Viva; P: Practical

Detailed Syllabus:

S. N.	Contents	Hours
1	Plant layout Dairy plant layout, objectives & advantages, different types of layouts, layout design procedure, site layout, plant layout, equipment layout, symbols used for plant design and layout, preparation of detail plant layout with model planning	5
2	Plant design Plant design process, location of plant, selection of site, dairy building planning, space requirements for dairy plants, estimation of service requirements including peak load consideration, utility/service sections, arrangement of equipment, milk piping, material handling in dairies, building construction materials, floors, foundations, walls doors and windows, drains and drain layout	7
3	Production management Definition, function and structure of production management, production planning & control, work study and measurement motion and time study, plant operations, efficiency factors losses, financial and managerial efficiency provision for industrial legislation in dairy industry	6



4	Personal management Manpower planning, recruitment, training, transfer, promotions policies, job specifications, job evaluation, job enhancement, job enrichment, MBO, working conditions	5
5	Safety management Hazards prevention security for plant machinery and the employees, plant maintenance. Prevention & break-down maintenance spare parts inventory, tools. food hygiene, personnel hygiene, plant hygiene, water quality, cleaning and sanitizing	5
Total		28

Reference Books:

1	D.B. Puranik, Dairy Plant Management, New India publishing Agency
2	Tufail Ahmed, Dairy Plant Engineering & Management, Kitab Mahel
3	Lalat Chander, Text book of dairy plant layout and design, ICAR, New Delhi

Supplementary learning Material:

1	Dairy plant management , https://egyankosh.ac.in/handle/123456789/758
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Pedagogy: Following one or more points can be incorporated as relevant pedagogy methods.

- Direct classroom teaching
- Audio Visual presentations/demonstrations
- Assignments/Quiz
- Continuous assessment
- Interactive methods
- Seminar/Poster Presentation
- Industrial/ Field visits
- Course Projects

Suggested Specification table with Marks (Theory) (Revised Bloom’s Taxonomy):

Distribution of Theory Marks in %						R: Remembering; U: Understanding; A: Applying;N: Analyzing; E: Evaluating; C: Creating
R	U	A	N	E	C	
15%	20%	20%	20%	15%	10%	

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcomes (CO):

Sr.	Course Outcome Statements	%weightage
CO-1	To understand the different types of layouts, preparation of detail plant layout	20
CO-2	To identify the construction requirement for establishing dairy plant	30
CO-3	To interpret the production planning and plant operations	20
CO-4	To assess the manpower training and handling	30



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Curriculum Revision:	
Version:	2.0
Drafted on (Month-Year):	June-2022
Last Reviewed on (Month-Year):	-
Next Review on (Month-Year):	June-2025