



# Information Brochure



**KAMDHENU UNIVERSITY**  
**College of Dairy Science**  
**Amreli**

## Vision



"To prepare leaders for handling, processing and marketing of milk and milk products and all other aspects of dairy, a popular, critical, and ever-growing component of the Indian food industry."

## Mission



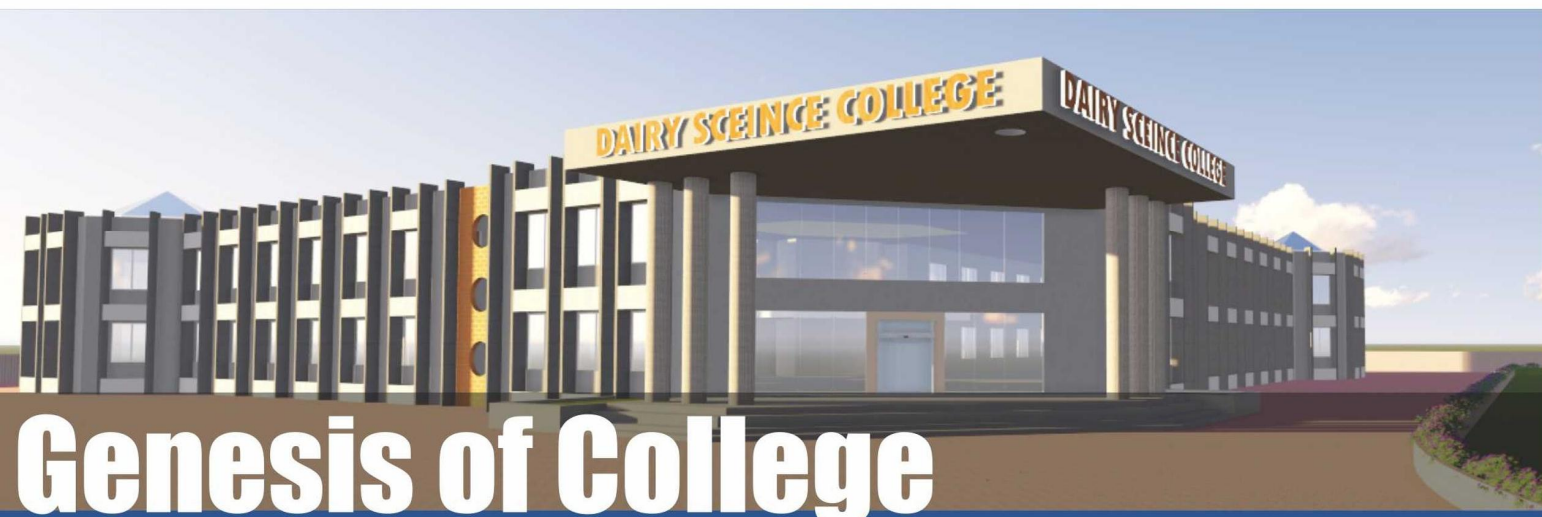
"To be a nationally distinct, locally relevant and accessible institution of dairy education, research and extension and be a leader among peers and stakeholders."

## Values



- Loyal and dedicated to mission and vision
- Passion and commitment to excellence
- Flexible, responsive, and innovative
- Accountable, trustworthy, and professional
- Honesty, integrity, and continuous improvement with pride





# Genesis of College

Contribution of India for the milk and milk industry at global level is highly substantial and appreciable too. In Saurashtra region, dairy industry is still in developing stage compared to other parts of Gujarat. In last five year Gujarat Milk Marketing Federation has extended their partner list in Saurashtra region and now it also includes Amreli, Junagadh, Bhavnagar, Kutch district cooperatives as their partners. Hence, there is a need of dairy technologists for the efficient growth of dairy Industry in this region. At present, we find shortage of such dairy technologists in spite the existing colleges for this course. Moreover, considerable numbers of students from existing colleges of this course also opt for further study in India or abroad, which also adds in this crisis. By considering above mentioned situation as well as to strengthen dairy education and also for the development of dairy industry in specifically Saurashtra region as well as to support the dairy sector of other parts of Gujarat and India in general, the Government of Gujarat has started College of Dairy Science at Amreli on 1<sup>st</sup> Aug, 2010.

This college provides a platform for the overall development of the students and cater the need of new dairy technologist to the fast developing dairy field. It is the only dairy science college in Saurashtra region, being second in Gujarat and 17<sup>th</sup> in India as a whole. The College of Dairy Science, Amreli is the first college of the Kamdhenu University, an exclusive university started by Gujarat Government vide Act No. 9, 2009 for development of Veterinary Sciences, Dairy Sciences and Fisheries Sciences.

B.Tech. (Dairy Technology) is a four year course in which students are imparted with theoretical and practical knowledge in five different departments like Dairy Technology, Dairy Chemistry, Dairy Microbiology, Dairy Engineering and Dairy Business Management. They learn the principles of technology, microbiology, chemistry, engineering, and business management to develop new and improved methods in production, preservation, marketing and utilization of milk and other products.

One year industrial training in the dairy plant is also given to the students. The training provides a platform to enhance the practical knowledge and also boost confidence level of the students. In this training, all sections/departments are covered from purchase of raw materials to finished product marketing. Students are given training of milk processing, product manufacturing, product testing, packaging, cleaning, maintenance aspects, account, purchase, marketing, etc.

During hands-on-training and experiential learning, students prepare a detailed report on business plan/entrepreneurship for production of dairy products in the area of specialized processing from procurement of raw material to processing including packaging and storage, product manufacturing, organize resources and utilities, selling the product, maintain accounts and documents, wind up production etc. Twenty five credits are allotted for hands on training in fifth and sixth semester. The evaluation of this training is conducted by the committee appointed by the Principal and Dean of the college.

Students of our college are undergoing training in various well known dairy plants of Gujarat like Amul Dairy, Anand; Mother Dairy, Gandhinagar; Sabar Dairy Himmatnagar; Sumul Dairy, Surat; Sugam Dairy, Baroda; Panchamrut Dairy, Godhara; Sarvottam Dairy, Rajkot; and Sorath Dairy, Junagadh.



# Facilities Available



## PROGRAM OFFERED :

- B. Tech. (Dairy Technology)

## ADMISSION REQUIREMENT :

- 10+2 Science with 'A'/'A&B' Group, JEE of Current year.
- Merit list will be based on 60:40 ratio (PCM Marks : JEE Marks).
- SC, ST, SEBC and ICAR reservation as per the norms of Government.

## FEE STRUCTURE (INR) :

(Admission Year 2015-16) (subject to change by the govt.) :

	One time fee	Odd Semester	Even Semester
Boys	5700	8000	7550
Girls	5700	3000	2550

## DEPARTMENTS & LABORATORIES :

### Dairy Technology Department :

- This discipline is dealing with the processing of milk and milk products like Ice cream, cheese, khoa, ghee, milk powder, etc including packaging and keeping environment in mind.
- This discipline also covers how by products during the manufacturing is to be processed and utilized. Judging and the sensory of the product is also the part of discipline.

### Dairy Engineering Department :

- It deals with the basic as well as advanced studies regarding mechanization, designing and lay out.
- It also deals with the instrumentation and process control required for automation of basic processes.

### Dairy Microbiology Department :

- This discipline deals with the basic microbiological aspects during processing of milk and milk products including quality assurance.
- The subject again emphasizes on the health beneficial bacteria by using them in natural as well as by recombinant methods.

### Dairy Chemistry Department :

- This discipline deals with the components of milk and chemical aspects during processing of milk and milk products including quality assurance.
- It also deals with biochemical aspects and nutritional aspects of milk products to human body.

### Dairy Business Management Department :

- This discipline deals with the basic managerial aspects required at industrial organization from raw milk production to finished products.
- It covers financial as well as marketing aspects along with necessary adjunct courses.

For each above department separate laboratory facilities are also available.

### Classroom & Library Facilities

- Classrooms are equipped with the LCD/LED projector, ITC facilities

### Hostel Facilities

- Separate hostel facilities for boys and girls are also available.





## RESEARCH AND PLACEMENT

### RESEARCH ACTIVITIES AND ACHIEVEMENTS

#### Completed Project :

- Research project entitled "Immunomagnetic separation based nanotechnological feat for detection of aflatoxin" funded by Department of Biotechnology, Ministry of Science and Technology, Government of India, New Delhi.

#### Ongoing Project :

- Research project entitled "Development of Probiotics fortified Soy food for Health and Nutritional benefits of Elderly population." funded by Department of Science and Technology, Ministry of Science and Technology, Government of India, New Delhi.
- Research project entitled "Bio-Conjugation of Iron oxide/Gold Nanoparticles for the detection of Aflatoxin M1 in Milk" funded by Gujarat State Biotechnology Mission, Department of Science and Technology, Government of Gujarat, Gandhinagar.

#### New Project Sanctioned :

- Research project entitled "Development of Nano-tag and Thread based micro fluidic system biosensor for detection of Aflatoxin M1 in milk" funded by Department of Biotechnology, Ministry of Science and Technology, Government of India, New Delhi. (Total cost- Rs. 4645000/- Rupees Fourty Six Lakhs Fourty Five Thousand Only)

### PLACEMENT AT VARIOUS DAIRY PLANTS

Sr. No.	Name of the Organization	Sr. No.	Name of the Organization
1	Sabar Dairy, Himmatnagar	8	Mahi Dairy, Rajkot
2	Panchamrut Dairy, Godhra	9	Sudama Dairy, Porbandar
3	Sarvottam Dairy, Bhavnagar	10	Uttam Dairy, Ahmedabad
4	Dudhsagar Dairy, Mehsana	11	Vadilal Ice Cream, Ahmedabad
5	Gopal Dairy, Rajkot	12	Amr Dairy, Amreli
6	Sorath Dairy, Junagadh	13	Almarai Dairy, Dubai
7	Madhur Dairy, Gandhinagar	14	Sarhad Dairy, Kutch

# B. TECH. (Dairy Technology) Course Structure

Sr. No.	Course No.	Course Title	Credits
<b>FIRST SEMESTER</b>			
1	DBM-1101	Dairy Development	1(1+0)
2	DBM-1102	Milk Production Management	2(1+1)
3	DBM-1103	Applied Mathematics	2(2+0)
4	DBM-1104	English	3(2+1)
5	DC-1101	Organic Chemistry	3(2+1)
6	DE-1101	Engineering Drawing	2(0+2)
7	DE-1102	Fluid Mechanics	3(2+1)
8	DE-1103	Workshop Practice	2(1+1)
9	DM-1101	Fundamentals of Microbiology	4(2+2)
10	NSS®	National Social Scheme	1(0+1)
		<b>Total</b>	<b>22(13+09)</b>
<b>SECOND SEMESTER</b>			
1	DBM-1205	Economic Analysis	2(2+0)
2	DBM-1206	Industrial Statistics	3(2+1)
3	DC-1202	Chemistry of Milk	3(2+1)
4	DE-1204	Heat & Mass Transfer	3(2+1)
5	DE-1205	Thermodynamics	3(2+1)
6	DM-1202	Introductory Dairy Microbiology	3(2+1)
7	DT-1201	Market Milk	5(3+2)
8	DT-1202	Traditional Dairy Products	3(2+1)
9	NSS®	National Social Scheme	1(0+1)
		<b>Total</b>	<b>25(17+08)</b>
<b>THIRD SEMESTER</b>			
1	DBM-2107	Computer Programming	3(1+2)
2	DC-2103	Physical Chemistry of milk	3(2+1)
3	DC-2104	Biochemistry	3(2+1)
4	DE-2106	Electrical Engineering	3(2+1)
5	DE-2107	Refrigeration & air-conditioning	3(2+1)
6	DM-2103	Microbiology of Dairy Products	3(2+1)
7	DT-2103	Fat Rich Dairy Products	4(3+1)
8	DT-2104	Ice-cream and Frozen desserts	4(2+2)
9	NSS®	National Social Scheme	1(0+1)
		<b>Total</b>	<b>26(16+10)</b>
<b>FOURTH SEMESTER</b>			
1	DBM-2208	Financial Management	3(2+1)
2	DC-2205	Chemistry of Dairy Products	3(2+1)
3	DE-2208	Dairy Engineering	3(2+1)
4	DE-2209	Instrumentation and process control	3(2+1)
5	DM-2204	Starter Cultures & Fermented Milk Products	4(2+2)

Sr. No.	Course No.	Course Title	Credits
6	DM-2205	Dairy Biotechnology	3(2+1)
7	DT-2205	Packaging of Dairy Products	3(2+1)
8	DT-2206	Cheese and Fermented Milks Technology	5(3+2)
9	NSS®	National Social Scheme	1(0+1)
		<b>Total</b>	<b>27(17+10)</b>
<b>FIFTH SEMESTER</b>			
1	DBM-3109	Cost Accounting	2(2+0)
2	DC-3106	Chemical Quality Assurance	3(2+1)
3	DC-3107	Environmental Studies	3(2+1)
4	DE-3110	Dairy Process Engineering	4(3+1)
5	DE-3111	Principles of Dairy Machine Design	3(2+1)
6	DM-3106	Quality and Safety Monitoring in Dairy Industry	3(2+1)
7	DT-3107	Condensed and Dried Milks	5(3+2)
8	DT-3108	By-products Technology	4(3+1)
		<b>Total</b>	<b>27(19+08)</b>
<b>SIXTH SEMESTER</b>			
1	DBM-3210	IT in Dairy Industry	2(1+1)
2	DBM-3211	Operation Research	2(2+0)
3	DC-3208	Food Chemistry	3(2+1)
4	DE-3212	Food Engineering	3(2+1)
5	DE-3213	Dairy Plant Design and Layout	3(2+1)
6	DM-3207	Food & Industrial Microbiology	3(2+1)
7	DT-3209	Food Technology	4(3+1)
8	DT-3210	Judging of Dairy Products	3(2+1)
9	DT-3211	Dairy Plant Management and Pollution Control	3(2+1)
		<b>Total</b>	<b>26(18+08)</b>
<b>SEVENTH SEMESTER</b>			
1	DBM-4112	Communication Skill and Entrepreneurship Development	2(2+0)
2	DBM-4113	Dairy Extension Education	1(1+0)
3	DP-4101	Dairy Plant Operations and Management-I (Experiential Learning)	25 (5+20)
		<b>Total</b>	<b>28(08+20)</b>
<b>EIGHTH SEMESTER</b>			
1	DBM-4214	Marketing Management and International Trade	2(2+0)
2	DC-4209	Human Nutrition	1(1+0)
3	DP-4202	Dairy Plant Operations and Management-II (Experiential Learning)	25 (5+20)
		<b>Total</b>	<b>28(08+20)</b>
		@ : Non-credit Course	



# GLIMPSE OF ACTIVITIES







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