

Government Degree College

Tekkali



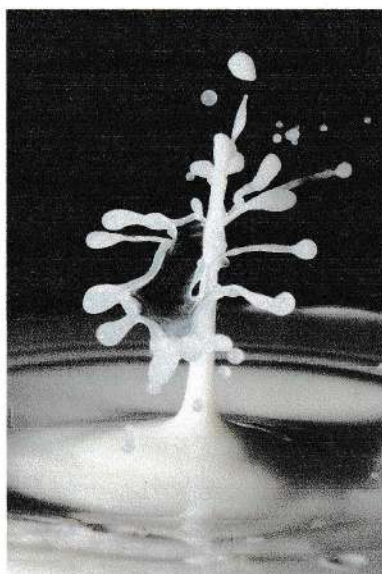
Department of Chemistry

Academic Year 2024-2025

Certificate Course

On

DAIRY TECHNOLOGY



Government Degree College Tekkali

REQUESTING FOR THE APPROVAL OF CERTIFICATE COURSE

1. Department : **CHEMISTRY**
2. Title of the Certificate Course : **DAIRY TECHNOLOGY**
3. Name of the Course Coordinator : **Sri V Luke Paul**
4. Course Code : **04-CHE-2024**
5. Objectives of the Course :

On successful completion of this course, students will be able:

- Understand the physical composition of milk
- Know Proper maintenance of farms
- Acquaint with Dairy management & Development
- Understand Microbiological aspects of milk
- Know Refrigeration of dairy products

6. Outcomes of the Course :

1. Students will be able to develop skills to serve society through various positions pertaining to Dairy industry.
2. Students can have a breakthrough of diversification along their career in the direction of jobs and entrepreneurship.

7. Duration of the Course : **30 hrs**
8. Date of Commencement of the Course : **15.10.2024**
9. Course Fee : **Nil**
10. No. Of Students : **30**

Signature of the Course Coordinator

Signature of the Department In-charge

Signature of the Principal
PRINCIPAL
Govt. Degree College
TEKKALI-532 203

Govt.Degree College Tekkali

Certificate Course on Analytical Methods in Chemistry (Course Code: 03-CHE-2024)

Objectives & Outcomes

The Department of Chemistry has decided to offer a certificate course on “Dairy Technology” for the II, III B.SC Chemistry students to enhance their Skills which are essential for their Professional development.

Objectives:

On successful completion of this course, students will be able:

- Understand the physical composition of milk
- Know Proper maintenance of farms
- Acquaint with Dairy management & Development
- Understand Microbiological aspects of milk
- Know Refrigeration of dairy products

Course Outcomes:

1. Students will be able to develop skills to serve society through various positions pertaining to Dairy industry.
2. Students can have a breakthrough of diversification along their career in the direction of jobs and entrepreneurship


Signature of the Course Coordinator


Signature of the Department In-charge


Signature of the Principal

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Govt. Degree College
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Certificate Course

Dairy Technology

Course Code: 04-CHE-2024

SYLLABUS

Learning Objectives:

- Understand the physical composition of milk
- Know Proper maintenance of farms
- Acquaint with Dairy management & Development
- Understand Microbiological aspects of milk
- Know Refrigeration of dairy products

Dairy Technology

- Physical Chemistry of Milk - The physical composition of milk of different species and its various properties like density, viscosity etc.
- Milk Production Management & Dairy Development - Production of milk and the management and development of dairy products.
- Fluid Mechanics - Units, dimensions and properties of the fluids.
- Fundamentals of Microbiology - The concept, scope and history of Microbiology.
- Market Milk - Market of milk in India and several countries and the proper way to manufacture different kinds of milk.
- Introductory Dairy Microbiology - The complex microbiology of milk and the importance and the ways of hygienic milk production.
- Chemistry of Milk - Definition and structure of milk, factors affecting composition of milk, its nomenclature and classification of milk proteins.
- Condensed & Dried Milks - Status and scope of condensed and dried milk in India and abroad, along with definition and legal standards of condensed milk, sweetened condensed milk and evaporated milk.
- Refrigeration and Air Conditioning - The basic refrigeration cycles and concepts required for the various kinds of milk.
- Dairy Engineering - The basic engineering concepts being made used in the various dairy manufacturing processes


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GOVERNMENT DEGREE COLLEGE TEKKALI		
DEPARTMENT OF CHEMISTRY		
CERTIFICATE COURSE 2024-25		
DAIRY TECHNOLOGY		
STUDENTS REGISTERED 2024-25		
S.NO.	NAME OF THE STUDENT	GROUP
1	BODDAPU JANARDHAN	III MPC
2	GEDELA SAI KIRAN REDDY	III MPC
3	GEDELA SURYA CHANDRA RAO	III MPC
4	IPPILI KUMARA SWAMY	III MPC
5	KANCHARANA DEEKSHITH	III MPC
6	KONARI SRAVANI	III MPC
7	KORRAYI ESWARARAO	III MPC
8	KUJJA LAKSHMANA	III MPC
9	METTA DILEEP	III MPC
10	PARUPUDI JYOTSHNA	III MPC
11	POTNURU SAIPALLAVI	III MPC
12	RAYAVALASA JAYARAM	III MPC
13	BANGARU USHA SRI	III BHC
14	KALLA KEERTHI	III BHC
15	KILLI BHARGAVI	III BHC
16	KURAMANA KAVYA	III BHC
17	MODA DILLEERAO	III BHC
18	NAGAVAMSAM SIDDHU	III BHC
19	GORLA KRANTHI	III CBZ
20	IPPILI HARIKA	III CBZ

V. [Signature]

[Signature]
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DAIRY TECHNOLOGY

[illegible]

DAIRY TECHNOLOGY

[illegible]

GOVERNMENT DEGREE COLLEGE TEKKALI

DEPARTMENT OF CHEMISTRY

CERTIFICATE COURSE 2024-25

DAIRY TECHNOLOGY

24	25	26	27	28	29	30	No. of classes attended	Signature of the student
12-11-2024	13-11-2024	14-11-2024	15-11-2024	16-11-2024	18-11-2024	19-11-2024		
P	P	P	P	P	P	P	30	B. Jaang Redhan
P	P	P	P	P	P	P	29	G. Saikrishna Reddy
P	P	P	P	P	P	P	30	G. Surya chandrasekar
P	P	P	A	P	P	P	28	I. KUMARA SWAMY
P	P	P	P	P	P	P	30	M. DEEKSHITHA
P	P	A	P	P	P	P	28	K. Sravani
P	P	P	P	P	P	P	29	K. Sswagato
P	P	P	P	P	P	P	30	K. LAKSHMANA
P	P	P	P	A	P	P	28	M. Dilip
P	P	P	P	P	P	P	30	P. Jyotsna
P	P	P	P	P	P	P	29	P. Sai Pallavi
P	P	P	P	P	P	P	30	R. Jayaram
P	P	P	P	P	P	P	30	B. USHA SRI
P	P	P	P	P	P	P	30	K. Keerthi
P	P	P	P	P	P	P	29	K. Bhargavi
P	P	P	P	P	P	P	30	M. Thanya
P	P	P	P	P	P	P	30	M. Dilip RAO
P	P	P	P	P	P	P	30	D. Seetha
P	P	P	P	P	P	P	29	G. Sravanti
P	P	P	P	P	P	P	30	T. Harika

Prantik
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Govt. Degree College
TEKKALI-532 203

V. Jyoti

GOVERNMENT DEGREE COLLEGE, TEKKALI

CERTIFICATE COURSE

DAIRY PROCESSING

EXAMINATION

Name of the student:

Group:

1.By regulation, milk from cows treated with antibiotics usually must be withheld for __ hours.

- a) 48 – 72 b) 30 – 60 c) 48 – 108 d) 72 – 96

2.Rules developed by the __ are designed to protect the health and welfare of consumers.

- a) United States Department of Agriculture (USDA) b) Protein and Lactose Organization (PLO)
c) Future Farmers of America (FFA) d) Food and Drug Administration (FDA)

3.What is the principal carbohydrate in the milks of all mammals?

- a. Lactose b. Glucose c. Sucrose d. Fructose

4.Percentage of water in buffalo milk is:-

- a. 65-67 % b. 70-75 % c. 80-85 % d. 87-90 %

5.Soft fats in milk fat are:-

- a. Lauric & Stearic b. Capric & Lauric c. Oleic & Butyric d. Oleic & Lauric

6.Principal protein in milk is:-

- a. Albumin b. Lactalbumin c. Casein d. Lactoglobulin

7.Percentage of mineral matter in milk is about :-

- a. 1 % b. 0.7 % c. 1.5 % d. 0.05 %

8.Example of soft cheese is:-

- a. Cheddar b. Swiss c. Brick d. Cottage

9.Under which of the following weather conditions would you expect to observe the greatest decrease in milk yield per cow?

- a) Cold and dry b) Hot and humid c) Cool and humid d) Warm and dry

10.Mixture of milk and cream containing not less than 10.5 percent milk fat, but less than 18 percent milk fat, is the definition of?

- a) Light whipping cream b) Light cream c) Half-and-half d) Heavy cream

11.The feed additive isoacid gives a __ pound daily milk response, with maximum response in early lactation.

- a) 2 to 4 b) 4 to 6 c) 6 to 8 d) 8 to 10

12.Lactose has water solubility of

- a. 100% b. 50% c. 18% d. 25%

13.Which enzyme is tested for cream pasteurization?

- a. Plasmin b. Phosphatase c. Catalase d. peroxidase

14.Milk is a good source of all water-soluble vitamins except for __

- a) Cyanocobalmin b) Riboflavin c) Ascorbic Acid d) Thiamine

15.___ is a milk process that makes milk more easily digested by those with a sensitive digestive system.

- a) Ionization b) Evaporation c) Pasteurization d) Homogenization

16. ___ amino acids are commonly found in milk proteins, including the essential amino acids.

- a) 7 b) 12 c) 14 d) 19

17. Summer milk has been estimated to contain 1.6 times as much vitamin ___ as winter milk.

- a) A b) B c) C d) D

18. The milk becomes the property of the buyer once ?

- a) The transport truck reaches the plant b) It is loaded into the transport truck on the farm
c) The transport truck leaves the farm d) It is unloaded into the processor's bulk tanks

19. Cows with ___ have a higher incidence of mastitis because physical injury is more likely.

- a) Sickled hocks b) Horns c) Lower foot angles d) Pendulous udders

20. Of the listed below products, which contains no dairy ingredients?

- a) Gelato b) Sherbet c) Custard d) Sorbet

21. As it comes from a cow, the solids portion of milk contains approximately 3.7 percent fat and ___ percent solids-not-fat.

- a) 3% b) 6% c) 9% d) 12%

22. Milk contains 87 % water and the rest is solids and fats. Which of the following is not included as milk solid?

- a) Protein b) Water c) Carbohydrate d) Milk Fat

23. The part of the mammary gland where milk is produced is called:

- a) Capillary b) Teat Cistern c) Chine d) Alveolus

24. The heritability of the traits for milk production is:

- a) 15% b) 25% c) 55% d) 100%

25. The Primary Milk carbohydrate is:

- a) Leucine b) Sucrose c) Arginine d) Lactose

26. The primary Protein in Milk is:

- a) Casein b) Tryptophan c) Lysine d) Arginine

27. What is the application of any effective method or substance to a clean surface for destruction of pathogen is called?

- a. Pasteurization b. High Temperature Treatment c. Sanitization d. Cleaning

28. A product consisting of a mixture of milk and cream which contains not less than 10.5% milk fat is called?

- a. Concentrated Milk b. Low Fat Milk c. Half-and -Half d. Eggnog

29. The process of raising or lowering the percent of fat in milk or cream to a desired standard is called?

- a. Enrichment b. Fortification c. Standardization d. None of the above

30. The high nutritive value of cheese is due to

- a. High mineral contents b. High protein contents c. Taste & flavor d. All of the above

GOVERNMENT DEGREE COLLEGE, TEKKALI

CERTIFICATE COURSE

DAIRY PROCESSING

EXAMINATION - KEY ANSWERS

1. a) 48 – 72
2. d) Food and Drug Administration (FDA)
3. a. Lactose
4. d. 87-90 %
5. c. Oleic & Butyric
6. c. Casein
7. c. 1.5 %
8. d. Cottage
9. b) Hot and humid
10. c) Half-and-half
11. b) 4 to 6
12. c. 18%
13. d. peroxidase
14. c) Ascorbic Acid
15. d) Homogenization
16. d) 19
17. a) A
18. b) It is loaded into the transport truck on the farm
19. d) Pendulous udders
20. d) Sorbet
21. c) 9%
22. b) Water
23. d) Alveolus
24. d) 100%
25. d) Lactose
26. a) Casein
27. c. Sanitization
28. c. Half-and –Half
29. c. Standardization
30. b. High protein contents

GOVERNMENT DEGREE COLLEGE TEKKALI			
DEPARTMENT OF CHEMISTRY			
CERTIFICATE COURSE 2024-25			
DAIRY TECHNOLOGY			
MARKS SHEET 2024-25			
S.NO.	NAME OF THE STUDENT	GROUP	Marks Secured
1	BODDAPU JANARDHAN	III MPC	28
2	GEDELA SAI KIRAN REDDY	III MPC	29
3	GEDELA SURYA CHANDRA RAO	III MPC	28
4	IPPILI KUMARA SWAMY	III MPC	29
5	KANCHARANA DEEKSHITH	III MPC	28
6	KONARI SRAVANI	III MPC	29
7	KORRAYI ESWARARAO	III MPC	27
8	KUJJA LAKSHMANA	III MPC	28
9	METTA DILEEP	III MPC	26
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11	POTNURU SAIPALLAVI	III MPC	27
12	RAYAVALASA JAYARAM	III MPC	29
13	BANGARU USHA SRI	III BHC	29
14	KALLA KEERTHI	III BHC	28
15	KILLI BHARGAVI	III BHC	27
16	KURAMANA KAVYA	III BHC	28
17	MODA DILLEERAO	III BHC	27
18	NAGAVAMSAM SIDDHU	III BHC	26
19	GORLA KRANTHI	III CBZ	28
20	IPPILI HARIKA	III CBZ	29

V. Reddy

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Feedback on Certificate Course

15 responses

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Name of the student

15 responses

GEDELA SURYA CHANDRA RAO

IPPILI HARIKA

K KAVYA

k. sravani

N Siddu

BANGARU USHA SRI

POTNURU SAIPALLAVI

KANCHARANA DEEKSHITH

K.Lakshmana

GORLA KRANTHI

B USHA SRI

BODDAPU JANARDHAN

P JYOTSHNA

RAYAVALASA JAYARAM

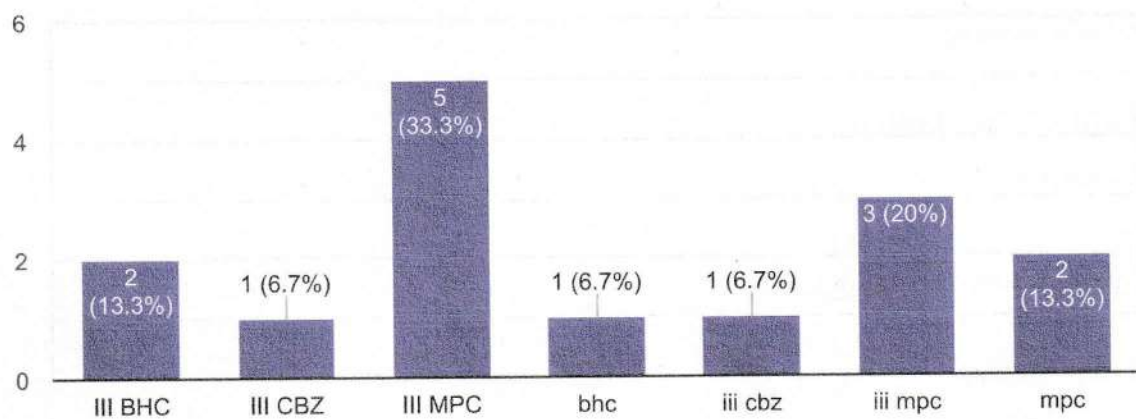
GEDELA SAI KIRAN REDDY



Year & Group

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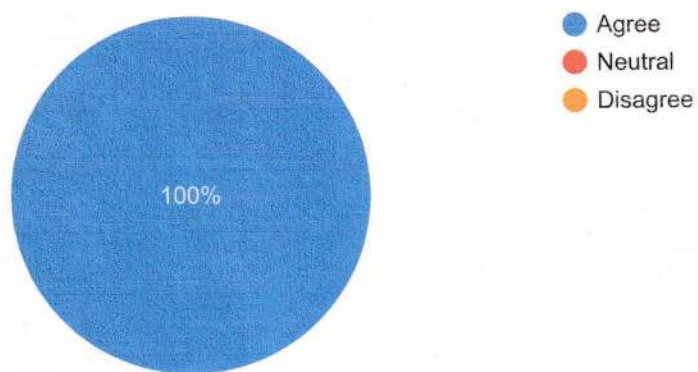
15 responses



1. The course I pursue is useful for my goal attainment

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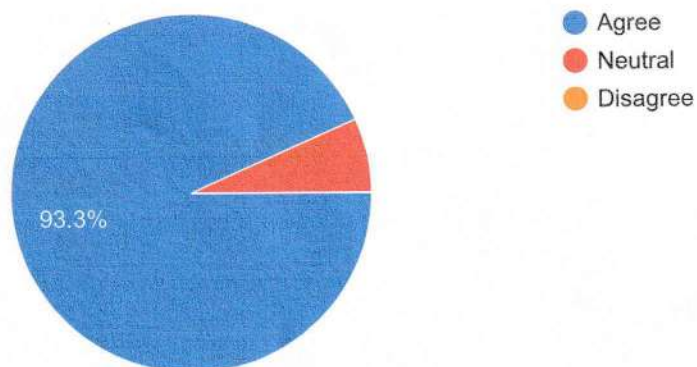
15 responses



2. The course is useful for getting job opportunities relevant

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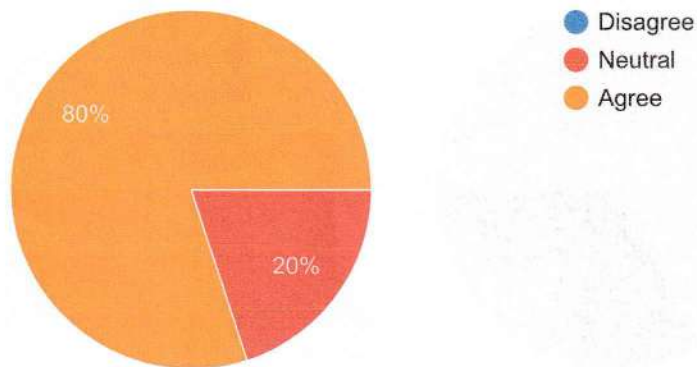
15 responses



3. The syllabus would help me to improve laboratory space

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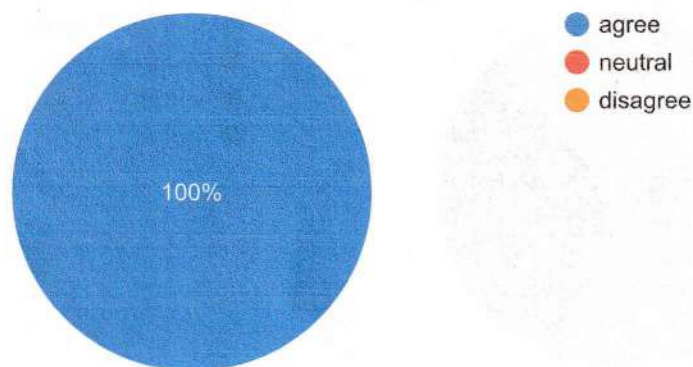
15 responses



4. The course is useful for pursuing higher studies

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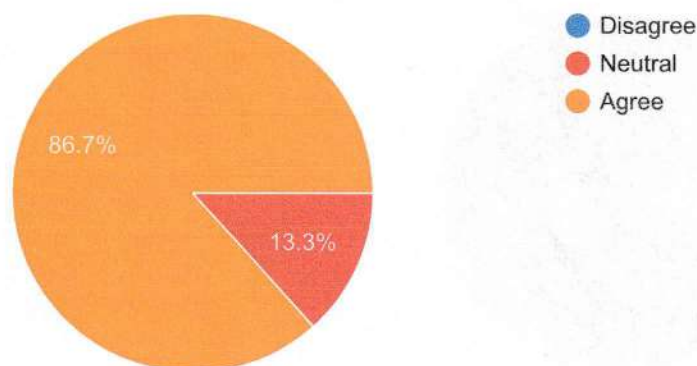
15 responses



5. syllabus is in accordance with modern technology

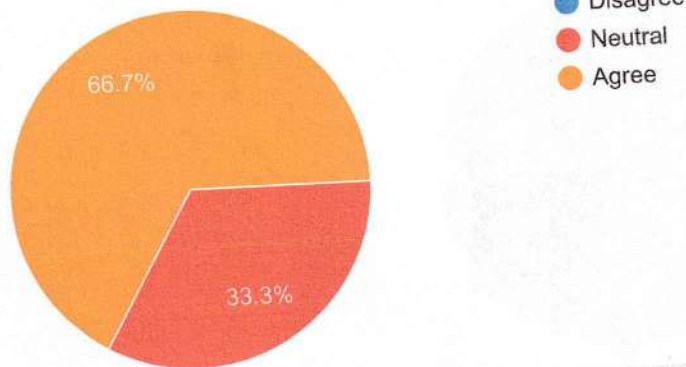
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15 responses



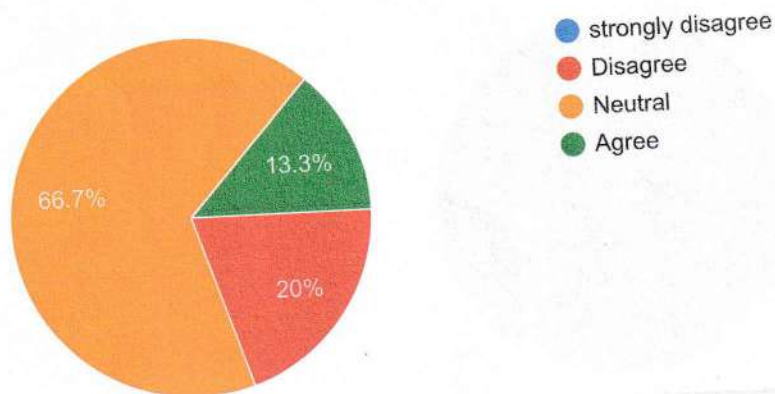
6. syllabus of the course is up-to-date and satisfactory

15 responses



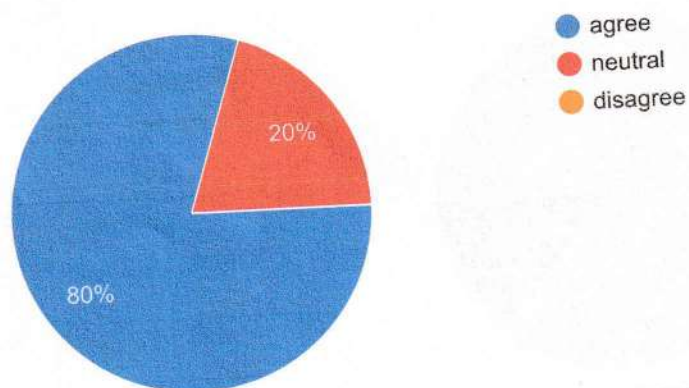
7. changes are required to the syllabus

15 responses



8. the course would increase my confidence

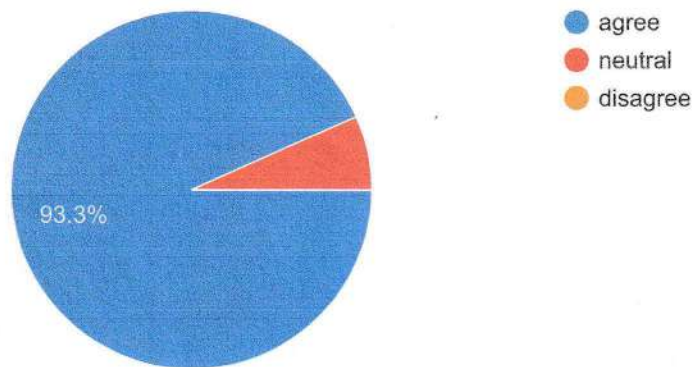
15 responses



9. I suggest continuous of the course.

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15 responses



Suggestions if any

11 responses

nil

GOOD

NIL

Very good sir

good

nice sir

good sir

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3/20/2025

 **GOVERNMENT DEGREE COLLEGE, TEKKALI**
(Accredited with NAAC 'B' Grade) 

DEPARTMENT OF CHEMISTRY

Course Certificate

Certified that Mr/Ms. BODDAPU JANARDHAN of
III MPC has successfully completed 30 Hours of
Certificate Course on "DAIRY TECHNOLOGY" and scored
A Grade during the academic year 2024-25.

 Course Coordinator  IQAC Coordinator  Principal

 **GOVERNMENT DEGREE COLLEGE, TEKKALI**
(Accredited with NAAC 'B' Grade) 

DEPARTMENT OF CHEMISTRY

Course Certificate

Certified that Mr/Ms. GEDELA SAI KIRAN REDDY of
III MPC has successfully completed 30 Hours of
Certificate Course on "DAIRY TECHNOLOGY" and scored
A Grade during the academic year 2024-25.

 Course Coordinator  IQAC Coordinator  Principal



 **GOVERNMENT DEGREE COLLEGE, TEKKALI**
(Accredited with NAAC 'B' Grade) 

DEPARTMENT OF CHEMISTRY

Course Certificate

Certified that Mr/Ms. GEDELA SURYA CHANDRA RAO of
III MPC has successfully completed 30 Hours of
Certificate Course on "DAIRY TECHNOLOGY" and scored
A Grade during the academic year 2024-25.



 Course Coordinator  IQAC Coordinator  Principal

 **GOVERNMENT DEGREE COLLEGE, TEKKALI**
(Accredited with NAAC 'B' Grade) 

DEPARTMENT OF CHEMISTRY

Course Certificate

Certified that Mr/Ms. IPPILI KUMARA SWAMY of
III MPC has successfully completed 30 Hours of
Certificate Course on "DAIRY TECHNOLOGY" and scored
A Grade during the academic year 2024-25.

 Course Coordinator  IQAC Coordinator  Principal



 **GOVERNMENT DEGREE COLLEGE, TEKKALI**
(Accredited with NAAC 'B' Grade) 

DEPARTMENT OF CHEMISTRY

Course Certificate

Certified that Mr/Ms. KANCHARANA DEEKSHITH of
III MPC has successfully completed 30 Hours of
Certificate Course on "DAIRY TECHNOLOGY" and scored
A Grade during the academic year 2024-25.




 Course Coordinator  IQAC Coordinator  Principal

 **GOVERNMENT DEGREE COLLEGE, TEKKALI**
(Accredited with NAAC 'B' Grade) 

DEPARTMENT OF CHEMISTRY

Course Certificate

Certified that Mr/Ms. KONARI SRAVANI of
III MPC has successfully completed 30 Hours of
Certificate Course on "DAIRY TECHNOLOGY" and scored
A Grade during the academic year 2024-25.

 Course Coordinator  IQAC Coordinator  Principal




GOVERNMENT DEGREE COLLEGE TEKKALI
DEPARTMENT OF CHEMISTRY
CERTIFICATE COURSE 2024-25
DAIRY TECHNOLOGY

ACTION TAKEN REPORT ON FEEDBACK ON CERTIFICATE COURSE

The feedback on certificate course entitled '**Dairy Technology**' was collected and analyzed. Based on this, the following action has been taken.

- The certificate course will be continued for the next academic year.
- The syllabus will be reviewed in the next academic year.

1.


(Dr. B. SATEESH KUMAR)
Dept. In-Charge



COURSE COORDINATOR

2.

(Dr. P.V.N. ACHARYULU)

3.


(P.V. SATYANARAYANA)


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