



# **SREE NARAYANA COLLEGE KANNUR**

ACCREDITED BY NAAC WITH 'A' GRADE (AFFILIATED TO KANNUR UNIVERSITY)

Sree Narayana College Kannur, P.O. Thottada, Kannur, Kerala, India - 670 007

✉ [sncollegekannur@gmail.com](mailto:sncollegekannur@gmail.com) ☎ 0497 - 2731085

🌐 [www.sncollegekannur.ac.in](http://www.sncollegekannur.ac.in)



## **1.2.1- DVV CLARIFICATIONS**

Circular, brochure, report, attendance sheet, letter of approval for starting the course, time table, syllabus covered for the following VAC : 1) Certificate course in Dairy Microbiology (2023-24) 2) Certificate course in Water quality Monitoring (2020-21) 3) Add on course in Tally and GST (2022-23) 4) Certificate course in Production of Biofertilizer (2022-23) 5) Certificate course in Python (2021-22) 6) Certificate course in Hygiene product making (2022-23).



**SREE NARAYANA COLLEGE KANNUR**

POST GRADUATE DEPARTMENT OF MATHEMATICS

**CERTIFICATE COURSE IN**

**PYTHON**

**2021-22**

## **ABOUT COURSE**

**FOR III DC AND II PG STUDENTS  
OFFLINE AND ONLINE  
PRACTICAL SESSIONS**

### **TOPICS COVERED**

- 1.PARTS**
- 2.FUNCTIONS**
- 3.STRINGS**
- 4.LIST,SETS**



## **SREE NARAYANA COLLEGE, KANNUR**

THOTTADA P.O., KANNUR - 670 007, KERALA, INDIA

(Affiliated to Kannur University)

Established in 1960

NAAC ACCREDITED with 'A' Grade (CGPA 3.32)

Dr. X. Ajayakumar  
Principal

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

Ph: 04972731085

To,

Head of the Department  
Department of Mathematics  
Sree Narayana college, Kannur

**Subject:** Approval to Conduct Add on Course on Python

Dear

Head of the Department, Department of Mathematics

I am pleased to inform you that your proposal to conduct the certificate course titled "Certificate course in Python" has been reviewed and approved. This program aligns with our institution's objectives to foster skill development and enhance academic and professional competencies among students.

Please ensure that all necessary arrangements, including course materials, faculty coordination, and infrastructure, are in place well before the start date.

Additionally, the following points should be adhered to during the planning and execution of the course:

1. Maintain a clear communication channel with students regarding registration and course details.
2. Ensure adherence to the institution's guidelines for course delivery and assessment.
3. Submit a final report post-completion of the course, highlighting key outcomes and feedback.

Should you require any assistance or resources from the administration, please feel free to reach out. I trust that the program will be conducted successfully and will greatly benefit the participants.

Best Regard

**PRINCIPAL**  
**SREE NARAYANA COLLEGE**  
**KANNUR**





SREE NARAYANA COLLEGE , KANNUR  
POST GRADUATE DEPARTMENT OF MATHEMATICS

## CERTIFICATE COURSE

### PYTHON PROGRAMMING

**Duration of the course:** 30 Hrs

**Course breakup –**

- Direct classroom teaching
- Guidance mode
- Self study
- Lab

**Course Vision** – A stepping stone to the world of Data Science.

**Course Objective** – To develop a thorough understanding in data analytics using Python.

**Course outcomes –**

- Demonstrate the usage of built-in objects in Python.

- Analyse the significance of Python program development environment by working on real world examples.

## Syllabus

### Module 1: **INTRODUCTION**

Introduction – What is a program - programming languages – machine language – Assembly language – High level language. Software development – History of Python programming language.

### Module 2: **PARTS OF PYTHON PROGRAMMING LANGUAGE**

Parts – Identifiers – keywords – statement and expressions – Variables – Operators – Data types – Indentation – Comments – Reading input – print output – type – conversions.

### Module 3: **CONTROL FLOW STATEMENT**

The if decision control flow statement – The if-else decision control flow statement – The if-else if-else decision control flow statements – Nested-if statement – The while loop – The for loop – The continue and break statements.

### Module 4: **FUNCTIONS**

Built-in functions – commonly used modules – Function; Definition and calling function – The return statement and void function – Scope and lifetime of variables – Default parameter- keyword arguments.

### Module 5: **STRINGS**

Creating and storing strings – The str( ) functions – Basic string

operations – Accessing characters in string by index numbers – String slicing and joining – String methods- formatting strings.

### Module 6: **LIST, DICTIONARIES, TUPLES & SETS**

Creating list – Basic list operations , indexing and slicing in lists – Built in functions – List methods – The del statement – Creating dictionary built-in functions – Dictionary methods – Creating Tuples – Basic tuple operations – Built-in function – Methods, Relation with List and Dictionary. Zip( ) function, Sets – set methods.

## **REFERENCE**

1. Introduction to Python programming - Gowrishankar S. & Veena A.

2. Python workbook- Ben Stephenson

### **Evaluation**

**Total : 30 marks**

<b>Mode of Evaluation</b>	<b>Max. Marks</b>	<b>Duration</b>
Theory	20 marks	1 hour
Practical	10 marks	1 hour

TOTAL MARKS	30 marks	
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CERTIFICATE  
COURSE  
IN  
PYTHON

2021 - 2022















Sl. No	NAME	CLASS	16	17	20						
			Jan 22	Jan 22	Jan 22						
1.	Anagha Suresh	II MC Maths	x	x	x						
2.	Anasuya T.P	"	x	x	x						
3.	Anya KV	"	x	x	x						
4.	Anya Jackson	"	x	x	x						
5.	Disha P	"	x	x	x						
6.	Eashana PCP	"	x	x	x						
7.	Harsha MC	"	x	x	x						
8.	Kavya Vyayan	"	x	x	x						
9.	Parvathy PK	"	x	x	x						
10.	Pooja E.P	"	x	x	x						
11.	Rinu PV	"	x	x	x						
12.	Sneha CH	"	x	x	x						
13.	Swamitha RP	"	x	x	x						
14.	Swathina P	"	x	x	x						
15.	Thabzeera NP	"	x	x	x						
16.	Amal K	III Bsc. Maths	x	x	x						
17.	Anya Sathyan	"	x	x	x						
18.	Anupriya V.V	"	x	x	x						
19.	Anusree T	"	x	x	x						
20.	Aparna C	"	x	x	x						
21.	Aadha T.K	"	x	x	x						
22.	Harsha K.C	"	x	x	x						
23.	Johna M	"	x	x	x						
24.	Megha N	"	x	x	x						
25.	Nihara C.P	"	x	x	x						
26.	Sandra M	"	x	x	x						
27.	Shilpa C.C	"	x	x	x						
28.	Sowav. Latheesh	"	x	x	x						
29.	Geeya Vinod	"	x	x	x						
30.	Vismaya M	"	x	x	x						
31.	Adithya Ashok	"	x	x	x						
32.	Aghanya K	"	x	x	x						
33.	Arun Reghu	"	x	x	x						







Department of Microbiology  
Sree Narayana College, Kannur  
Re accredited by NAAC with A Grade

# Certificate Course in Production of Biofertilizer



Impart knowledge on different types of Biofertilizers and their importance & to provide training on the production of biofertilizers.



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Email: sncollegekannur@gmail.com

Dr. C P Satheesh

Principal

Ph:04972731085

To,

Head of the Department

Department of Microbiology

Sree Narayana college, Kannur

**Subject:** Approval to Conduct Certificate Course on Dairy Microbiology

Dear

Head of the Department, Department of Microbiology

I am pleased to inform you that your proposal to conduct the certificate course titled "Production of Biofertilizer" has been reviewed and approved. This program aligns with our institution's objectives to foster skill development and enhance academic and professional competencies among students. Please ensure that all necessary arrangements, including course materials, faculty coordination, and infrastructure, are in place well before the start date.

Additionally, the following points should be adhered to during the planning and execution of the course:

1. Maintain a clear communication channel with students regarding registration and course details.
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3. Submit a final report post-completion of the course, highlighting key outcomes and feedback.

Should you require any assistance or resources from the administration, please feel free to reach out. I trust that the program will be conducted successfully and will greatly benefit the participants.

Best Regard



*C.P. Satheesh*  
**PRINCIPAL**  
**SREE NARAYANA COLLEGE**  
**KANNUR**

## Certificate Course on Production of Biofertilizers

### Course Objectives

1. To impart knowledge on different types of Biofertilizers and their importance
2. To provide training on the production of biofertilizers

### Learning Outcomes

1. Ability to distinguish different types of biofertilizers and its applications in the field
2. Development of integrated approach for the application of fertilizers.

### Duration of Course

Eight weeks

### Syllabus

#### Module I

Introduction and history of biofertilizers, scope and importance of Biofertilizers.

#### Module II

Classifications of Biofertilizers : Azospirillum, Azotobacter, Bacillus, Pseudomonas, Rhizobium and Frankia; Cyanobacterial biofertilizers- Anabaena, Nostoc, Hapalosiphon and fungal biofertilizers- AM mycorrhiza and ectomycorrhiza.

#### Module III

Production technology: Strain selection, sterilization, growth and fermentation, equipment, mass production of carrier based and liquid bio fertilizers. Quality control of bio fertilizers -Applications of biofertilizers in the field.

# Awareness and Training on mushroom Cultivation.

on

14 / Feb / 2023 at 10.30 am

Seminar Hall.

1. Anon Sijojann	BSc Entomology	<del>Anon</del>
2. Ansal-k	BSc Botany	<del>Ansal</del>
3. Athul Ray R	Bsc Botany	<del>Athul</del>
4. Ashok kumar	BSc Botany	<del>Ashok</del>
5. Jayam/Surendran	BSc Microbiology	<del>Jayam</del>
6. Anjlia Kakkoti	BSc Microbiology	<del>Anjlia</del>
7. Anjana Mohan	Bsc Botany	<del>Anjana</del>
8. Jincy P	Bsc Botany	<del>Jincy</del>
9. Mayyuka. k	Bsc Microbiology	<del>Mayyuka</del>
10. Aswathi suresh	BSc. Microbiology	<del>Aswathi</del>
11. Nardana. cp	BSC Microbiology	<del>Nardana</del>
12. Sudhina Biju	BSC. Microbiology	<del>Sudhina</del>
13. Asika Anesh PV	BSc. Microbiology	<del>Asika</del>
14. Arya sree. m	BSC microbiology	<del>Arya</del>
15. Vyshnavi. V.K.	Bsc Microbiology.	<del>Vyshnavi</del>
16. Akshara Karshna. M.	Bsc Microbiology	<del>Akshara</del>
17. Viswanth Vinodan V	Bsc Microbiology	<del>Viswanth</del>
18. Anthony m.k	Bsc microbiology	<del>Anthony</del>
19. Avanthika. K.P	Bsc Microbiology	<del>Avanthika</del>
20. Mayyootha. k	Bsc Microbiology	<del>Mayyootha</del>
21. Theerthi Ranjith	Bsc Microbiology	<del>Theerthi</del>
22. Sika Sasi	"	<del>Sika</del>
23. Navyasree. M	"	<del>Navya</del>
24. Sanika Rakesh	"	<del>Sanika</del>
25. Ardiva-k	"	<del>Ardiva</del>
26. Nandana-c	"	<del>Nandana</del>

27	Vallu Krishna	BSc Microbiology	
28	Sriqatha S	BSc Microbiology	
29	Keerthana Pradeep	BSc Microbiology	
30	Devika C	B Sc Microbiology	
31	Risha Abululla	B.Sc Microbiology	
32	Ajay Jay KV	BSc Microbiology	
33	Maash K	B.Sc. Microbiology	
34	Nandana Pradeep	BSC Microbiology	
35	Amrita vijaya	Bsc Microbiology	
36	Athithya K	BSC Microbiology	
37	Thejasree Sajeev	BSc Microbiology	
38	Anagha S	BSC Microbiology	
39	Gaithi Renjith Babu	Bsc. Microbiology	
40	Abhinav P	BSc Microbiology	
41	Ahmy C	Bc Microbiology	
42	Ajay T	Bsc Microbiology	
43	LINA GATHAN	"	
44	Nandana Rajeev	"	
45	Anagha PV	"	
46	NANDANA K.L.	"	
47	RENESH D P	"	
48	Gaithi Krishna	"	
49	Dr. M.P. Shanuj.	(Secretary, Staff Council)	
50	Dr. K P PRASANTH	IQAC coordinator	
51	Ajmes E.K.	Deputy Director of Agriculture & T	
52	Ashwadhini Rao	BSc Micro	
53	Ayaz R	"	
54	Anagha C	"	
55	Handisha V Deepa	"	
56	Sweetha MP	"	
57	Shanti C M	"	
58	Manjamma Ansaari	"	
59	Keerthana Subhash	"	
60	Varanya Basu	"	
61	Abinavth Babu	"	
61	Deerchi Ravi	Commerce	

62	BINDU RAMESH	Kudumbasree	
63	Revathi . P	Kudumbasree	
64	Dr. Bindu . V	Faculty, Dept of Commerce	
65	Devika . K	Bsc Micro	
66	Nithula . C . K	"	
67	"	"	
68	Anshika Sudheer	BSc BT , SSITS	
69	Devika . P . P	BSc BT , SSITS	
70	K . Sulfathi	BSc BT , SSITS	
71	Sali Marsal	Ushass Kudumbasree	Sali
72	Sreeraja P . V	"	
73	Akshaya Shameer	Bsc Microbiology	
74	Banga Ganesh	"	
75	Sudhanshu . A	"	
76	Geopika Manoj	"	
77	Anamika . K	"	
78	Aiswarya . R	"	
79	Geetha . Lakshmi . M	"	
80	Sasira . V . C .	Zain Koderbagalur	
81	Sujanya	Zain "	
82	"	"	
83	Sita . Kumbhar	Dept . of Chemistry	
84	Puspajali . C . S	Dept of Commerce	
85	Kadreja . Neha . Subaiman	Bsc Microbiology	
86	Hiba . Noushad . A . P	"	
87	Aranya . R . V	"	
88	Neha . Punalath	"	
89	Tanus . S . Jayan	Bsc Microbiology	
90	Fathima . Shalin	Bsc Microbiology	
91	Anya . Komal . An	Bsc Microbiology	
92	Anusree . A	Bsc Microbiology	
93	Shobana Sherin Faisal	Bsc Microbiology	

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## **Report on the Certificate Course on the Production of Biofertilizer**

### **Organized by the Department of Microbiology**

The Department of Microbiology successfully conducted a Certificate Course on the Production of Biofertilizer, aimed at providing participants with theoretical knowledge and practical expertise in sustainable agricultural practices through the production and application of biofertilizers. The initiative was part of the department's efforts to promote eco-friendly and cost-effective alternatives to chemical fertilizers.

### **Objectives of the Course:**

- 1. To educate participants about the significance of biofertilizers in sustainable agriculture.**
- 2. To train individuals in the methods of isolating, culturing, and producing biofertilizers.**
- 3. To enhance skills for potential entrepreneurship in the biofertilizer industry.**



# Sree Narayana College, Kannur

NAAC Re-accredited with A Grade, CGPA: 3.04

## PG AND RESEARCH DEPARTMENT OF COMMERCE

IN ASSOCIATION WITH  
IQAC

ADD-ON COURSE  
2022-23



# TALLY + GST

### ABOUT THE COURSE

The "Tally with GST" course is a comprehensive and essential program designed to equip students, individuals and businesses with the knowledge and skills required to effectively manage their financial transactions in compliance with the Goods and Services Tax (GST) system. This comprehensive course covers essential topics such as GST implementation, tax compliance, invoice creation, and financial reporting using Tally

### TOPICS COVERED

- ✓ Introduction to Tally
- ✓ GST Basics
- ✓ GST Registration and Invoicing
- ✓ GST Return Filing





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*Dr. K. Ajayakumar*  
Principal

*Email:sncollegekannur@gmail.com*

*Ph:04972731085*

**To,**

Head of the Department

Department of Commerce

Sree Narayana college,Kannur

**Subject:** Approval to Conduct Add on Course on Tally +GST

Dear

Head of the Department,Department of Commerce

I am pleased to inform you that your proposal to conduct the certificate course titled "Add on course in Tally +GST" has been reviewed and approved. This program aligns with our institution's objectives to foster skill development and enhance academic and professional competencies among students. Please ensure that all necessary arrangements, including course materials, faculty coordination, and infrastructure, are in place well before the start date.

Additionally, the following points should be adhered to during the planning and execution of the course:

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Best Regard

**PRINCIPAL**  
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**KANNUR**



## Syllabus for the Course

### TALLY PLUS GST

Course Duration: 30 Hours

Modules: 3

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#### Module 1: Basics of Tally and Accounting (10 Hours)

##### 1.1 Introduction to Tally

- Overview of Tally and its uses.
- How to create and manage a company in Tally.

##### 1.2 Basic Accounting Concepts

- Types of accounts (Personal, Real, Nominal).
- Golden rules of accounting.

##### 1.3 Recording Transactions

- Sales, purchases, payments, and receipts entries.
  - Basic reports like Balance Sheet and Profit & Loss.
- 

#### Module 2: GST Setup and Transactions in Tally (10 Hours)

##### 1.1 Introduction to GST

- What is GST and its types (CGST, SGST, IGST).
- How GST works in business.

##### 1.2 Configuring GST in Tally

- Enabling GST in Tally.
- Creating GST-ledgers and tax rates.

##### 1.3 Recording GST Transactions

- Sales and purchases with GST.
  - GST reports like GSTR-1 and GSTR-3B.
- 

#### Module 3: Advanced Features in Tally with GST (10 Hours)

##### 1.1 Managing Inventory

- Creating stock items and categories.
- Recording stock transactions.

##### 1.2 Advanced GST Features

- Reverse Charge Mechanism (RCM).
- GST for service providers and composition dealers.

### 1.3 Finalizing Accounts

- Year-end adjustments and filing GST returns

PG AND RESEARCH DEPARTMENT OF COMMERCE

ADD-ON CERTIFICATE COURSE

TALLY PLUS GST

DETAILS OF ENROLLED STUDENTS

SL NO.	NAME OF THE STUDENT
1	ASHWAMI K
2	AISWARYA TV
3	ANU KRISHNA. K
4	YADHUKRISHNA PS
5	AVANYA RAJITH
6	SWETHA . K
7	VISMAYA VIVEK
8	MEGHA BABURAJ
9	SANDHRA RAJEEV
10	SWETHA PC
11	ASHLY K V
12	NIHARA RAGESHAN
13	VYSHNAV P P
14	ANAMIKA
15	ANEENA
16	ANJIMA
17	ANURAG C V
18	ANUROOP
19	ANURUDH
20	APSARA
21	ARJUN N C
22	ARUNDATHI
23	ATMAJ
24	DIYA
25	ALEKHYA
26	ANGEL
27	ANUPRIYA
28	ARJUN K
29	DIVYA V R
30	JASNA JALEEL
31	JEEVANA
32	KRISHNANJANA
33	ANUGRAH MV
34	ANURAJ K
35	ARUNIMA C V
36	DEVADATHAN.C
37	DEVANANDHA P
38	DEVANJANA P K
39	DEVI THEERTHA K

40	DEVIKA M
41	DHIYA K
42	ANUGRAH MV
43	ARYA K
44	ASRITH K V
45	AVANTHIKA.R
46	AVANTIKA PRAMOD VISWANATHAN
47	CHAITHRA VINOD
48	DIYA PRAKASH
49	DIYA SUJITH
50	FATHIMA SHIFA M K
51	GOPIKA C
52	HANEENA HASHM P
53	HANNA MUHAMMED ALI
54	JAIDEEP P
55	JIBINA A
56	AMRUTHA K
57	ANIRUDH A
58	ANUGRAH A
59	ANURAG K
60	AMRUTHA K
61	NAKSHATHRA P
62	NANDANA K
63	NIVEDYA P P
64	HRIDHIKRAJ K
65	HRISHIDA HARI
66	KRISHNAPRIYA M
67	NAMITHA K
68	AISWARYA HEMANTH
69	JYOTHIKA V

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## **Report on the Certificate Course on Tally and GST Organized by the Department of Commerce**

The Department of Commerce successfully organized a Certificate Course on Tally and GST to equip students and professionals with practical knowledge and skills in financial accounting and taxation. The course was designed to bridge the gap between theoretical knowledge and practical applications in the field of commerce, focusing on two critical areas: Tally ERP 9 and Goods and Services Tax (GST).

### **Objectives of the Course:**

1. To familiarize participants with the basics of Tally software for accounting purposes.
2. To provide a comprehensive understanding of GST laws and their practical application.
3. To enhance employability by imparting industry-relevant skills.



Sree Narayana college , Kannur

NACC Re - Accredited with A Grade CGPA 3.04

POST GRADUATE AND RESEARCH DEPARTMENT OF CHEMISTRY

CERTIFICATE COURSE 2020-21

# WATER QUALITY MONITORING

Course Co-ordinator

Mrs.Sumitha Chandran U K

Asst. Professor

Dept. Of chemistry





SREE NARAYANA COLLEGE, KANNUR

PG AND RESEARCH DEPARTMENT OF CHEMISTRY

NOTICE

Date : 02/02/2021

All students of B.Sc fourth and sixth semester are here by informed that Department is organizing a **Certificate Course on Water Quality Monitoring** from Monday 8<sup>th</sup> February 2021. The interested students can register for the course. For more details contact course co- ordinator Mrs. Sumitha Chandran U K.

HOD

Department of Chemistry

Contact : Mrs. Sumitha Chendran U K  
Assistant Professor of Chemistry  
Mob :9495897541





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Dr. K. Ajayakumar  
Principal

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

Ph: 04972731085

To,

Head of the Department

Department of Chemistry

Sree Narayana college, Kannur

**Subject:** Approval to Conduct Certificate Course on Water quality Monitoring

Dear

Head of the Department, Department of Chemistry

I am pleased to inform you that your proposal to conduct the certificate course titled "Water quality Monitoring" has been reviewed and approved. This program aligns with our institution's objectives to foster skill development and enhance academic and professional competencies among students.

The course is scheduled to begin on 08/02/2021 as outlined in the proposal. Please ensure that all necessary arrangements, including course materials, faculty coordination, and infrastructure, are in place well before the start date.

Additionally, the following points should be adhered to during the planning and execution of the course:

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Best Regard

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SREE NARAYANA COLLEGE, KANNUR

PG AND RESEARCH DEPARTMENT OF CHEMISTRY

CERTIFICATE COURSE ON WATER QUALITY MONITORING : CH20- CCWQM

### SYLLABUS

Course Code	:	CH 20-CCWQM
Year	:	2020-21
Course Duration	:	30 hours
Entry Requirement	:	Interested students of B.Sc Chemistry
Course Co-ordinator	:	Mrs.Sumitha Chandran U K

Clean fresh water is one of the most vital natural resources. Since quality of water is susceptible to changes with time and other factors, continuous monitoring of water is essential. Water quality assessment provides the base line information on water safety. Qualitative and quantitative measurements are needed to guarantee the purity of water from various sources of supply. This course on water quality assessment is an attempt to equip students with theoretical background and practical skills to participate in water quality ensuring practices.

#### **Aim**

The course intends to prepare a student in acquiring skills on the art of water monitoring and quantitative analysis of critical water quality parameters. It also brings in those aspects of chemistry which are important for water quality management and pollution control.



### Learning Outcomes

At the end of the course the student will be able to:

- Explain the general properties of water and understand water resources and water conservation.
- Develop awareness about water quality criteria and standards, and their relation to public health and environment
- Understand important parameters for measuring water quality.
- Know about the methods for the determination of water quality parameters
- Learn how to run accurate water quality tests and to determine how the parameters relate to each other.

### Course Content

#### I. Water Quality Fundamentals (8hours)

Chemistry of water, Physical and chemical properties, Water resources, water pollution, Important water Quality parameters and methods for their determination -turbidity, color, taste, pH, acidity, alkalinity, chemical constituents, hardness, dissolved oxygen etc., water sampling, standard for drinking water as per BIS specifications, household water treatment and safe storage.

#### II Analytical instruments –Brief outline(7 hours)

Flame Emission Spectrophotometer (FES) UV-Vis spectrophotometer, Atomic absorption spectrophotometer (AAS), Biological analyzers; Autoclave, incubator, water analyzer for pH, salinity and electrical conductance; Units in which the quality parameters are reporting during each analyzing.

#### II. Practical-Laboratory tests for water quality monitoring(15hours)

Determination of pH and conductivity, Test for acidity and alkalinity, Test for total hardness, Test for chloride, calcium, iron etc., calculation of magnesium content and total solids. Analytical instruments –Brief outline. Flame Emission Spectrophotometer (FES), UV-Vis spectrophotometer, Atomic absorption spectrophotometer (AAS), Biological analyzers; Autoclave, incubator, water analyzer for pH, salinity and electrical conductance; Units in which the quality parameters are reporting during each analyzing.

SREE NARAYANA COLLEGE, KANNUR

PG AND RESEARCH DEPARTMENT OF CHEMISTRY

CERTIFICATE COURSE ON WATERQUALITY MONITORING (CH20 : CCWQM )

TIMETABLE 2020-21

Time	Monday	Tuesday	Wednesday	Thursday	Friday
Theory 8.45 - 9.45	AN	KMJ	UKS	JK	VVP
Practical 3.30- 5.00	UKS+ AN	UKS+ KMJ	UKS+ KTG	UKS+ JK	UKS + VVP

UKS- Mrs. Sumitha Chandran U K

AN- Mrs. Aparna N

KMJ - Dr. Jitha Kunhikrishnan M

JK - Dr. Jithesh K

VVP- Dr. Vinisha Valsaraj P

KTG- Mrs. Geethadevi K T

SREE NARAYANA COLLEGE, KANNUR

PG AND RESEARCH DEPARTMENT OF CHEMISTRY

Certificate course 2020-21

CERTIFICATE COURSE ON WATERQUALITY MONITORING (CH20 : CCWQM )

Enrolled Student List

Sl No.	Reg no.	Name
1	CH20CC 01	Adithya
2	CH20CC 02	Adya Saseendran
3	CH20CC 03	Afeefa V Ayoob
4	CH20CC 04	Aiswarya T
5	CH20CC 05	Anisha A
6	CH20CC 06	Aparna Raveendran
7	CH20CC 07	Arya Rajeev
8	CH20CC 08	Devika rajesh
9	CH20CC 09	Ishika Dhanesh
10	CH20CC 10	Krishna N
11	CH20CC 11	Megna J S
12	CH20CC 12	Neha N
13	CH20CC 13	Punnya Rajeevan
14	CH20CC 14	Reshmi C
15	CH20CC 15	Sarga K V
16	CH20CC 16	Snighda A V
17	CH20CC 17	Theja Rajesh U N
18	CH20CC 18	Vaishnavi R
19	CH20CC 19	Abhinraj P P
20	CH20CC 20	Adwaith ShaJi
21	CH20CC 21	Arshin Anand
22	CH20CC 22	Aswanth C
23	CH20CC 23	Aiswarya A
24	CH20CC 24	Anaswara M
25	CH20CC 25	Anvitha Raveendran
26	CH20CC 26	Ashima P C
27	CH20CC 27	Aswathi C K
28	CH20CC 28	Aswathi P P
29	CH20CC 29	Gopika P

30	CH20CC 30	Hridya T K
31	CH20CC 31	Jinsiya C H
32	CH20CC 32	Maneesha C
33	CH20CC 33	Niveda P Vinod
34	CH20CC 34	Rahina E
35	CH20CC 35	Rithuparna R Mahesh
36	CH20CC 36	Samanya P
37	CH20CC 37	Sneha A V
38	CH20CC 38	Sneha T C
39	CH20CC 39	Sreya E K
40	CH20CC 40	Tanya Manusree
41	CH20CC 41	Theertha K K
42	CH20CC 42	Visrutha Raj
43	CH20CC 43	Abhinand K P
44	CH20CC 44	Abhinav T
45	CH20CC 45	Abhishek Saseendran
46	CH20CC 46	Akhil K
47	CH20CC 47	Sreejish P
48	CH20CC 48	Vaishnav S
49	CH20CC 49	Medha Prakash
50	CH20CC 50	Sneha O





**Department of Microbiology  
Sree Narayana College, Kannur  
Re accredited by NAAC with A Grade**

# **Certificate Course in Dairy Microbiology**



**This course is designed to educate the students about the microbiology of milk and milk products. The course content covers microorganisms associated with milk and milk products, production of hygienic milk, microbiological methods of milk testing, microbial spoilage of milk and milk borne diseases.**



## **Report on Certificate Course in Dairy Microbiology**

The Department of Microbiology successfully organized a **Certificate Course in Dairy Microbiology** aimed at enhancing the knowledge and practical skills of participants in the field of dairy science. The course attracted [number] participants, including students, researchers, and professionals from diverse backgrounds.

### **Objectives of the Course**

1. To provide theoretical and practical knowledge of dairy microbiology.
2. To impart skills in microbiological analysis of milk and milk products.
3. To explore the role of microbes in dairy processing and quality control.

### **Course Highlights**

The course was meticulously designed to cover both theoretical and practical aspects of dairy microbiology. The following topics were covered:

- Basics of dairy microbiology and milk composition.
- Techniques for detecting microbial contamination in milk.
- Fermentation processes and probiotics in dairy products.
- Quality assurance and safety standards in the dairy industry.
- Hands-on training in microbiological techniques such as plating, microscopy, and biochemical tests.

### **Resource Persons**

Expert faculty members from the Department of Microbiology, along with guest speakers from reputed dairy industries, delivered lectures and demonstrations. Their expertise and guidance were instrumental in enriching the learning experience of the participants.

### **Practical Sessions**

Participants were actively involved in practical sessions, which included:

- Microbial enumeration in milk.
- Testing for pathogenic organisms in dairy products.
- Preparation of yogurt and other fermented products.
- Application of HACCP principles in dairy processing.

### **Feedback and Outcome**

The participants appreciated the course for its well-structured curriculum, hands-on training, and interactive sessions. Many expressed that the knowledge and skills gained would significantly benefit

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their academic and professional pursuits. Certificates were distributed to all participants upon successful completion of the course.



## **Introductory Dairy Microbiology**

This course is designed to educate the students about the microbiology of milk and milk products. The course content covers microorganisms associated with milk and milk products, production of hygienic milk, microbiological methods of milk testing, microbial spoilage of milk and milk borne diseases.

**Course duration: 8 weeks (including a field trip / industrial visit)**

### **Module : I**

Hygienic milk: Introduction and Significance of dairy microbiology, Sources of contamination of milk and hygienic milk production.

### **Module : II**

Dairy microorganisms: Important classes of dairy microorganisms, useful microorganisms, spoilage and pathogenic microorganisms.

### **Module : III**

Microorganisms associated with milk: Microorganisms associated with raw milk and their significance, Role of psychrotrophs in milk, Effect of processing on microorganisms in milk.

### **Module : IV**

Microbiological methods of milk testing: Qualitative and quantitative methods of milk testing, Dye reduction test, Direct microscopic count (DMC), Standard plate count (SPC), Coliform counts in Milk, Methods of Enumeration of other groups of bacteria, Enumeration of yeast and moulds in Milk

### **Module : V**

Microbial spoilage of milk: Role of microbes in spoilage of milk – Microbial interactions, Milk fermentations, abnormal milk fermentations.

### **Module : VI**

Milk borne diseases: Food infection, intoxication and toxi-infection, Milk borne Diseases, Mastitic milk

## **TIME TABLE**

**Department of Microbiology**

**Certificate course in Dairy Microbiology**

<b>Time</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
<b>8.45am to 9.30</b>	<b>Mr.Ramesh C K V</b>	<b>Dr.Ayana P</b>	<b>Ms.Prajina</b>	<b>Ms.Sneha</b>	<b>Mr.Ramesh C K V</b>	<b>Dr.Ayana P</b>
<b>3.30pm to 5pm</b>	<b>Ms.Prajina</b>	<b>Ms.Sneha</b>	<b>Dr.Ayana P</b>	<b>Ms.Prajina</b>	<b>Mr.Ramesh C K V</b>	<b>Ms.Sneha</b>



# **SREE NARAYANA COLLEGE, KANNUR**

THOTTADA P.O., KANNUR - 670 007, KERALA, INDIA

(Affiliated to Kannur University)

Established in 1960

NAAC ACCREDITED with 'A' Grade (CGPA 3.32)

Dr, C P Satheesh  
Principal

Email:sncollegekannur@gmail.com

Ph:04972731085

**To,**

Head of the Department

Department of Microbiology

Sree Narayana college, Kannur

**Subject:** Approval to Conduct Certificate Course on Dairy Microbiology

Dear

Head of the Department, Department of Microbiology

I am pleased to inform you that your proposal to conduct the certificate course titled "Dairy Microbiology" has been reviewed and approved. This program aligns with our institution's objectives to foster skill development and enhance academic and professional competencies among students.

The course is scheduled to begin on 03/06/2024 and conclude on [end date], as outlined in the proposal. Please ensure that all necessary arrangements, including course materials, faculty coordination, and infrastructure, are in place well before the start date.

Additionally, the following points should be adhered to during the planning and execution of the course:

1. Maintain a clear communication channel with students regarding registration and course details.
2. Ensure adherence to the institution's guidelines for course delivery and assessment.
3. Submit a final report post-completion of the course, highlighting key outcomes and feedback.

Should you require any assistance or resources from the administration, please feel free to reach out. I trust that the program will be conducted successfully and will greatly benefit the participants.

Best Regard



  
PRINCIPAL  
SREE NARAYANA COLLEGE  
KANNUR