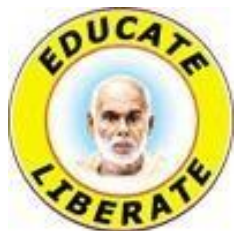
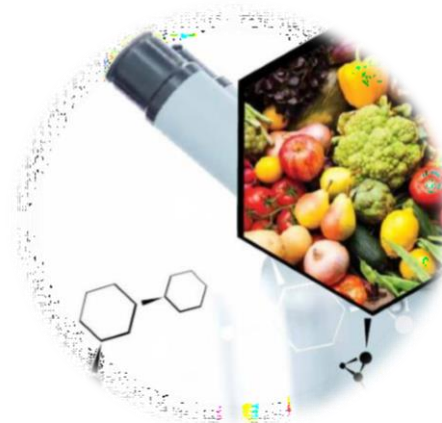


Sree Narayana College Chengannur, Alappuzha

(Affiliated to University of Kerala NAAC accredited with 'B' Grade)



**POST GRADUATE
DEPARTMENT OF
CHEMISTRY**



ORGANISING COMMITTEE

- SRI.VELLAPPALLY NADESAN (PATRON)
- DR.SHEREEN.K(PRINCIPAL IN CHARGE)
- DR.SMITHA SASIDHARAN
(IQAC COORDINATOR)
- DR.AMBILY CHANDRAN
(COORDINATOR-CERTIFICATE COURSE)
- DR.VENU.S
(HEAD DEPARTMENT OF CHEMISTRY)
- DR.JISHA SREEDHARAN
- DR.ANJU.K.S
- DR.RESHMI.R

Certificate Course on "Food Science & Technology"

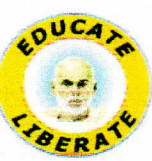
- COURSE DETAILS**
- THE COURSE IS OPENED TO ALL PG & UG STUDENTS
 - COURSE DURATION: 30Hrs(THEORY-24Hrs & PRACTICAL-6Hrs)
 - COURSE FEE:Rs.250/-
 - ASSESSMENT:ASSIGNMENT AND MCQ

Course Coordinator
Dr. Ambily Chandran
Assistant Professor
Dept. of Chemistry
S.N.College,Chengannur
Contact No.8921743927

Sree Narayana College, Chengannur, named after the great social reformer Sree Narayana Guru, is a major centre for higher education to the rural community in the vicinity. The college was established in 1981. The vision of our College is to provide 'Liberation through Education' and 'Enlightenment through Education'. The college offer five undergraduate and three post graduate courses.

The Post Graduate Department of Chemistry ever since its establishment remains one of the major departments of the college, which offers high quality teaching. The department is equipped with a wide range of facilities to aid the students to do well in their performance. We cordially invite the interested undergraduate and post graduate students to join the Certificate course on '**Food Science and Technology**' implemented by the Post Graduate Department of Chemistry in association with IQAC, S N College Chengannur.

The certificate course "**Food Science and Technology**" is likely to be a valuable asset for anyone who is interested in a career in the food industry. The course will provide students with the knowledge and skills they need to be successful in this growing field. Food science and technology is a multidisciplinary field that encompasses the study of food from its production to its consumption. It involves the application of scientific principles to the understanding of food composition, food safety, food processing, food packaging, food preservation, and food marketing. The field of food science and technology is constantly evolving, as new scientific discoveries and technological advances are made. This makes it a dynamic and exciting field to work in.



Sree Narayana College

Chengannur

Affiliated to the University of Kerala

NAAC Accredited with B Grade

Minutes of the Meeting of Board of Studies

Attendees:-

1. Smt. Shereen K (Principal)
2. Dr. K Sreelatha (Chairman, Board of studies)
3. Dr. Smitha Sasidharan (IQAC Coordinator)
4. Dr. Venu S (Head, Department of Chemistry)
5. Dr. Ambily Chandran (Course Coordinator)

Venue: Principal's Chamber

Date & Time: 20/10/2022 at 2.30pm


Agenda:

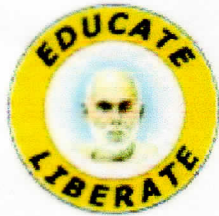
1. Review of Certificate course proposal

Minutes:

1. Reviewed the certificate course proposal submitted by Department of Chemistry.
2. Approved the syllabus and proposal of the certificate course on "Food Science and Technology".




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POST GRADUATE DEPARTMENT OF CHEMISTRY -
CERTIFICATE COURSE: FOOD SCIENCE AND TECHNOLOGY
(CH22FST)

Relevance of Food Science and Technology

Food science and technology is a multidisciplinary field that is relevant to our everyday lives in many ways, including:

- Ensuring food safety and security.
- Creating new and innovative food products.
- Improving the nutritional quality of food.
- Making food more sustainable.

▪ By developing new and innovative food products, they help to improve the variety and availability of food. And by making food more sustainable, they help to protect the environment.

▪ Food science and technology is a rapidly growing field, in addition to these food science and technology also has a broader impact on our society, by ensuring the safety and quality of food, food technologists help to protect public health. By developing new and innovative food products, they help to improve the variety and availability of food. And by making food more sustainable, they help to protect the environment.

Objectives

The students will be trained to understand and discuss the main principles, theories and concepts underlying established knowledge in food chemistry. On completing this course, students will be capable to:

- Describe food preservation methods help to prevent food spoilage and extend the shelf life of food. This is important for ensuring the safety and availability of food, especially in areas where food is scarce or where there is a risk of foodborne illness.
- Explain food processing methods help to improve the taste, texture, and nutritional value of food. They also help to make food more convenient and affordable.
- Explain food packaging methods help to protect food from spoilage, contamination, and damage. They also help to extend the shelf life of food and make it more convenient to store and transport.
- Describe food safety standards help to protect public health by ensuring that food is safe to eat. They are set by government agencies and food industry organizations.

FOOD SCIENCE AND TECHNOLOGY

UNIT – I INTRODUCTION OF FOOD SCIENCE

(4 Hrs)

Food: sources and classification – food as a source of energy - functions and biological importance of carbohydrates, protein, fat, vitamins and minerals - calorific value of food – energy requirements of individuals - balanced diet.

UNIT - II FOOD ADDITIVES AND PRESERVATIVES

(4 Hrs)

Definition, food colourants : natural and artificial - antioxidants, stabilizers, flavours, bleaching and maturing agents – leavening agents.

Definition - classification - methods of food preservation and processing by heat, cold, radiation, drying and deep freezing.

UNIT - III FOOD ADULTERATION AND QUALITY STANDARDS

(6 Hrs)

Definition – types – detection and analysis of adulterants in foods: milk, chilli powder, coffee powder, turmeric powder, ghee, oil and pulses.

Quality control - specification and standards - FA, WHO standards – packing and labeling of foods, Essential Commodities Act - Consumer Protection Act – AGMARK. Total quality management, good management practices, HACCP and codex alimentarius commission.

UNIT-IV FOOD TECHNOLOGY

(6 Hrs)

Principles and methods of food preservation - Heat processing, pasteurization, canning, dehydration, freezing, freeze drying, fermentation, microwave, irradiation and chemical preservatives - Aseptic preservation, hurdle technology, hydrostatic pressure technology, microwave processing, microfiltration, bacto-fugation, ultra-high voltage electric fields, pulse electric fields, high pressure processing, irradiation, thermosonication, dielectric heating, infrared, induction heating, antibacterial and bacteriocins.

UNIT-V FOOD PACKAGING AND FOOD SAFETY

(4 Hrs)

Food fortification. Milling, processing, composition, structure, product development and byproduct utilization of cereals, pulses, millets and oil seeds. Antinutritional factors. Instant ready mixes. Packaging - materials and methods. Food plant sanitation. Food hygiene. Environment and waste management.

References:

- Food Chemistry David Newton Facts on File, Inc. New York 2004
- Principles of Food Chemistry DeMan JM AVI Publishing Co Inc., 1976
- Swaminathan, M. (2012). Advanced Text book on food and Nutrition, Vol. II.
- Swaminathan, M. (2012). Handbook of Food & Nutrition. 5th Edition.
- Shakuntala, M.N and Shadaksharaswamy, M. (2013). Food Facts and Principles. New Age International.
- Srilakshmi, B. Food science. 3rd Edition. New Age International

PRACTICALS

6 hrs

1. Analysis of contents in fruit juices- starch, carbohydrates and calcium
2. pH analysis of fruits
3. Analysis of Vitamin C content in citrus fruits
4. Analysis of oxalate content in guava fruit
5. Analysis of Chocolates




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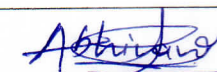
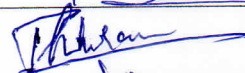
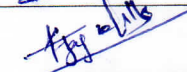



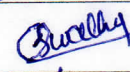




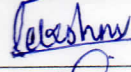
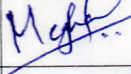
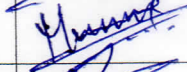


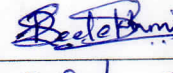
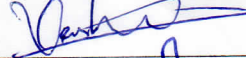
SREE NARAYANA COLLEGE CHENGANNUR
DEPARTMENT OF CHEMISTRY

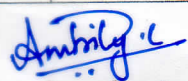
Certificate Course on "Food Science and Technology"
(CH22FSC)

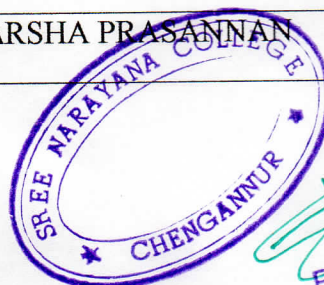
Duration: 3 months


Year: 2022-23

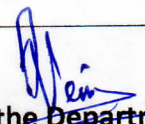
Student Enrolment for the certificate course

Sl No.	Candidate Code	Name	Signature
1	63522128001	ABHINAND S	
2	63522128002	ABHIRAMI P	
3	63522128003	AJAY J WILLS	
4	63522128004	AKHILA.A.U.	
5	63522128005	ANAGHA RAJ	
6	63522128006	ARYALAKSHMI G	
7	63522128007	ASWATHY S	
8	63522128008	COLLIN THOMAS EAPEN	
9	63522128009	DANISH V S	
10	63522128010	DEVIKA A S	
11	63522128011	JOBIN M R	
12	63522128012	LEKSHMI M	
13	63522128013	MEGHA P S	
14	63522128014	MUNNU R	
15	63522128016	RESHMI C	
16	63522128017	SONA S	
17	63522128018	SREELEKSHMI SAJI	
18	63522128019	VARSHA PRASANNA	


Course Coordinator




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CHENGANNUR


Head of the Department

CERTIFICATE COURSE ON "FOOD SCIENCE AND TECHNOLOGY"

ATTENDANCE REGISTER FOR THE MONTH OF October-November 2022

No.	NAME	Designation	Days													Working Days	Days Present	Days absent	Leave Taken	Remarks													
			1	2	3	4	5	6	7	8	9	10	11	12	13						14	15	16	17	18	19	20	21	22	23	24	25	26
1.	Abhinand S		X	X	X		X				X	X		a		X	X		X		X	X		X	X		X	X		14	13		Abhinand
2.	Abhirami P		X	X	X		X				X	X		a		X	X		X		X	X		X	X		X	X		14	13		Abhirami
3.	Djay.T. wills		a	X	X		X				X	X		X		X	X		X		a	X		X	X		X	X		14	12		Djay
4.	Arkha A.U.		X	X	X		X				X	X		a		X	X		X		X	X		X	X		X	X		14	14		Arkha
5.	Anagha Raj		X	X	X		X				X	X		a		X	X		X		X	X		X	X		X	X		14	13		Anagha
6.	Aryatekshmi G		a	X	X		a				X	X		X		X	X		X		X	X		X	X		X	X		14	12		Aryatekshmi
7.	Aswathy S		X	X	X		X				X	X		X		X	X		X		X	X		X	X		X	X		14	14		Aswathy
8.	Collin Thomas Rapen		X	X	X		X				X	X		a		X	X		X		X	X		X	X		X	X		14	13		Collin
9.	Danish V.S		X	X	X		a				X	X		X		X	X		X		X	X		X	X		X	X		14	13		Danish
10.	Devika A.S		X	X	X		X				X	X		X		X	X		X		X	X		X	X		X	X		14	14		Devika
11.	Jobin M.R.		X	X	X		X				X	X		a		X	X		X		X	X		X	X		X	X		14	13		Jobin
12.	Lakshmi M		X	X	X		X				X	X		X		X	X		X		X	X		X	X		X	X		14	14		Lakshmi
13.	Megha P.S		X	X	X		a				X	X		X		X	X		X		a	X		X	X		X	X		14	12		Megha
14.	Munnu R.		X	X	X		X				X	X		X		X	X		X		X	X		X	X		X	X		14	14		Munnu
15.	Reshmi C		X	X	X		X				X	X		X		X	X		X		X	X		X	X		X	X		14	14		Reshmi
16.	Sona S.		X	X	X		X				X	X		X		X	X		X		X	X		X	X		X	X		14	14		Sona
17.	Sreelekshmi Saji		X	X	X		X				X	X		X		X	X		X		X	X		X	X		X	X		14	14		Sreelekshmi
18.	Vaishya Prasanna		X	X	X		X				X	X		X		X	X		X		X	X		X	X		X	X		14	14		Vaishya

Course Coordinator

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ATTENDANCE REGISTER FOR THE

MONTH OF

January 20 22

(23 days - 30 m)

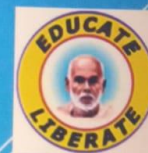
No.	NAME	Designation	Date													Working Days Present	Days Absent	Leave Taken	Remarks
			1	2	3	4	5	6	7	8	9	10	11	12	13				
1.	Ajma Fathima N		X	X	X	X	X	X	X	X	X	X	X	X	X	23	21	2	Ajma
2.	Anna Fathima		X	X	X	X	X	X	X	X	X	X	X	X	X	23	21	2	Anna
3.	Amrutha Jayakumar		X	X	X	X	X	X	X	X	X	X	X	X	X	23	22	1	Amrutha
4.	Ajaya Sunil		X	X	X	X	X	X	X	X	X	X	X	X	X	23	20	3	Ajaya
5.	Anji Viswanathan		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Anji
6.	Ajamel Paul		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Ajamel
7.	Ajaya P.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	22	1	Ajaya
8.	Ajamel S.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	21	2	Ajamel
9.	Devikrishna		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Devikrishna
10.	Gyreshma G.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Gyreshma
11.	Reshmi M. Raju		X	X	X	X	X	X	X	X	X	X	X	X	X	23	22	1	Reshmi
12.	Sanjay Krishan S.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	22	1	Sanjay
13.	Sneha		X	X	X	X	X	X	X	X	X	X	X	X	X	23	22	1	Sneha
14.	Sneerth S.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Sneerth
15.	Saelekshmi R.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	21	2	Saelekshmi
16.	Sukanya Subhadra		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Sukanya
17.	Vinaya Priya A.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	21	2	Vinaya
18.	Veenda		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Veenda
19.	Ajil S. B.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	21	2	Ajil
20.	Ajaya T.V.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	22	1	Ajaya
21.	Ajaya A.S.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	22	1	Ajaya
22.	Ashli A.R.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	22	1	Ashli
23.	Chippy Harish		X	X	X	X	X	X	X	X	X	X	X	X	X	23	22	1	Chippy
24.	Gowtham Prasad		X	X	X	X	X	X	X	X	X	X	X	X	X	23	22	1	Gowtham
25.	Krishna S.V.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Krishna
26.	Meenakshy A.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Meenakshy
27.	Meenu Ramesh		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Meenu
28.	Reshma R.S.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	22	1	Reshma
29.	Rohini S. Pillai		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Rohini
30.	Shamla P.S.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	22	1	Shamla
31.	Shadha R.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Shadha
32.	Saelekshmi M.S.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Saelekshmi
33.	Saathy S.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Saathy
34.	Vismaya V.		X	X	X	X	X	X	X	X	X	X	X	X	X	23	23	0	Vismaya



SRI ARAVIND COLLEGE
CHENNAI

**SREE NARAYANA COLLEGE
CHENGANNUR
ALAPPUZHA, KERALA**

AIDED COLLEGE AFFILIATED TO THE UNIVERSITY OF KERALA
NAAC ACCREDITED WITH GRADE B



CERTIFICATE

This is to certify that has
successfully completed the certificate course on "Food Science & Technology"
conducted by the Post Graduate Department of Chemistry, Sree Narayana College
Chengannur during 2022-2023

Dr. Venu S
Head, Department of Chemistry

Dr. Shereen K
Principal in Charge