

Department of Chemistry
Sree Narayana College, Kollam

**Certificate Course in “LAB SAFETY
RULES AND METHODS”**

2020-2021





Sree Narayana College, Kollam

Affiliated to University of Kerala- NAAC recredited with 'A' grade

Research & PG Department of Chemistry

Certificate course in

'LAB SAFETY RULES AND METHODS'

Qualification: Plus Two (Science)

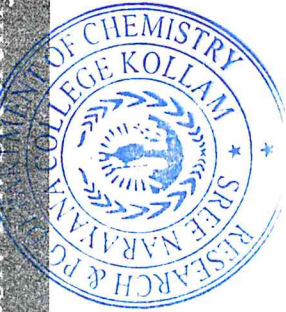
Duration: 6 months

"Admission is open now and can be taken directly from Department of Chemistry"

Contact Details:

HOD: Dr. V. L. Pushpa : +91 8129225858

Course coordinator: Dr. Sreeremya T. S.: +91 9745270050



LIST OF APPLIED STUDENTS

Sl Number	Name of Students	Address	Status
1	Archa Babu	Kottadiyil Veedu Chavara Puthukkadu P O 691585	Application Received
2	Ardra M J	Chaithram Perumon Perumon 691601	Application Received
3	Balu. A	Charippuram Bhoothakulam Bhoothakulam P O 691302	Application Received
4	Govardhan.S	Thampuratty Mukhathala Mukhathala 691577	Application Received
5	Krishnanunni M	Kaleekkal Kizhakathil Sasthamcottah Sasthamcottah Po 690521	Application Received
6	Krishnaraj T S	Sukrithi, Vikas Nagar 174a Pattathanam Pattathanam P O 691021	Application Received
7	Lavanya M A	Mani Mandiram Kaithakuzhy Adichanalloor 691573	Application Received
8	Megha Rajesh	Lekshmithoppil Neendakara Puthenthura 691588	Application Received
9	Melani P Siva	Nambarathu Mathilil Mathilil P O 691601	Application Received
10	Parvathy. S. R	Uthram Thazhava Kadathoor 690523	Application Received
11	Preethy Mol P	Star House	Application Received



		Keralapuram Perumpuzha P O 691504	
12	Revathi Janakan	Meenathethil Neendakara Puthenthura 691582	Application Received
13	Sanjana. B. Unni	Perumathiyil Mukhathala Mukhathala 691577	Application Received
14	Sreekuttan A	Mohana Vilasam Mukhathala Mukhathala 691577	Application Received
15	Sreelekshmi .S	Sreemandiram Kottarakkara P O Kottarakkara P O 691506	Application Received
16	Swathy . S	Kochuveettil S S Sadanam Edappallycotta P O Edappallycotta P O 691583	Application Received
17	Varsha Prakash	Lekshmi Vilas Beach Road Chinnakada 691001	Application Received
18	Vishnupriya.A.K	Anil Bhavan Koottikkada Koottikkada.P.O 691020	Application Received
19	Ajeesha . S	Ratheesh Bhavan Chathanpara Alamcode P O 695102	Application Received
20	Bhagya Prakash	Thiruvonam Kalluvathukkal Kalluvathukkal P O 691578	Application Received
21	Rakhi.P	Reghu Bhavan Kottarakara Pulamon P O 691531	Application Received
22	Varsha . C.P	Uthram Nivas Kizhakkanela Po Parippally Kizhakkanela 691574	Application Received



CERTIFICATE COURSE

(Offered By Department of Chemistry, S N College, Kollam)

Lab Safety Rules and Methods

Total Hours: 30

Aim of the Course

To develop awareness among students about the different aspects of laboratory safety, since it is essential to take proper precautions and implement safety guidelines while working in the laboratory.

Course objectives

- General lab safety rules and guidelines
- How to detect and control lab hazards
- Requirements for a Chemical Hygiene Plan

GENERAL ASPECTS OF EVALUATION

Mode of Evaluation – Certificate Course on Lab Safety Rules and Methods

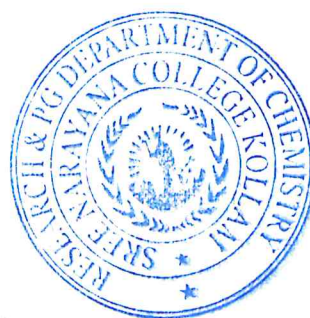
- i. Attendance for lecture session
- ii. Test for theory

The weightage is shown in Table 1

Table 1

No	Component	Marks
1	Paper-I	100

Parvath Haraji
Principal
Sree Narayana College
Kollam



Module 3: Chemical Hazards (5 hours)

Chemical hygiene plan, the new safety data sheets (SDS) versus the old material safety data sheets (MSDS), assessment of chemical toxicity, toxic hazards: dose and risk assessment, types of toxins, flammable hazards, flammability characteristics, flammability classes, causes of ignition, reactive hazards, explosives.

Module 4: Managing and Working with Chemicals (6 hours)

General considerations: chemical segregation, transfer and transport, chemical fume hoods (safety, types, operation), other types of ventilation, working with highly toxic compounds: general considerations, planning, precautions for minimizing exposure – handling, in the event of a spill, working with flammable substances (standard operating procedures), working with highly reactive or explosive substances, working with compressed gases: parts of the cylinder, cylinder pressure regulator, storage guidelines, transporting cylinders, handling compressed gas cylinders.

Module 5: Waste Handling (4 hours)

Characterization of waste, collection and storage (lids, leaks, labels, location, containers), consequences of mixing incompatibles solid wastes (chemicals, broken glass, sharps, cylinders, pick-up), hazardous waste minimization

Module 6: Laboratory Equipment (5 hours)

Working with electricity, working with water (liquid)-dependent equipment (hazards, proper use, heating baths), working with high pressure/vacuum, working with vacuum pumps, working with stirring and mixing devices, working with heating devices (oil, salt, sand baths, microwave ovens), working with ultrasonicators and centrifuges, Examples of common mistakes and ways to avoid them.

References

1. Laboratory safety for chemistry students (2nd ed): Robert H Hill and David C Finster, Wiley 2016. ISBN 9781119243380
2. CRC Handbook of Laboratory Safety: A. Keith Furr.
3. Handbook for Laboratory Safety: Benjamin Sveinbjornsson, Sveinbjorn Gizurarson.
4. Handbook of Laboratory Health and Safety Measures: S.B. Pal
5. Laboratory Safety: Theory and Practice: Anthony A. Fuscaldo, Barry J. Erlick and Barbara Hindman.



LIST OF QUALIFIED STUDENTS

Sl Number	Candidate Code	Name of Students	Address	Status
1	CP20LSRM1	Archa Babu	Kottadiyil Veedu Chavara Puthukkadu P O 691585	Qualified
2	CP20LSRM2	Ardra M J	Chaithram Perumon Perumon 691601	Qualified
3	CP20LSRM3	Balu. A	Charippuram Bhoothakulam Bhoothakulam P O 691302	Qualified
4	CP20LSRM4	Govardhan.S	Thampuratty Mukhathala Mukhathala 691577	Qualified
5	CP20LSRM5	Krishnanunni M	Kaleekkal Kizhakathil Sasthamcottah Sasthamcottah Po 690521	Qualified
6	CP20LSRM6	Krishnaraj T S	Sukrithi, Vikas Nagar 174a Pattathanam Pattathanam P O 691021	Qualified
7	CP20LSRM7	Lavanya M A	Mani Mandiram Kaithakuzhy Adichanalloor 691573	Qualified
8	CP20LSRM8	Megha Rajesh	Lekshmithoppil Neendakara Puthenthura 691588	Qualified
9	CP20LSRM9	Melani P Siva	Nambarathu Mathilil Mathilil P O 691601	Qualified
10	CP20LSRM10	Parvathy. S. R	Uthram Thazhava Kadathoor 690523	Qualified

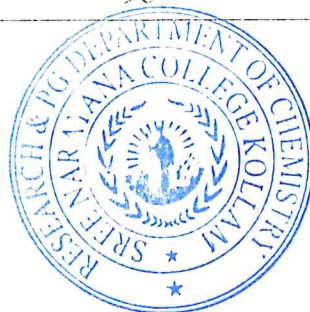


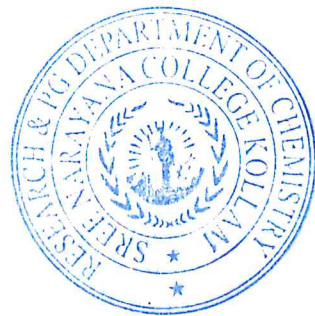
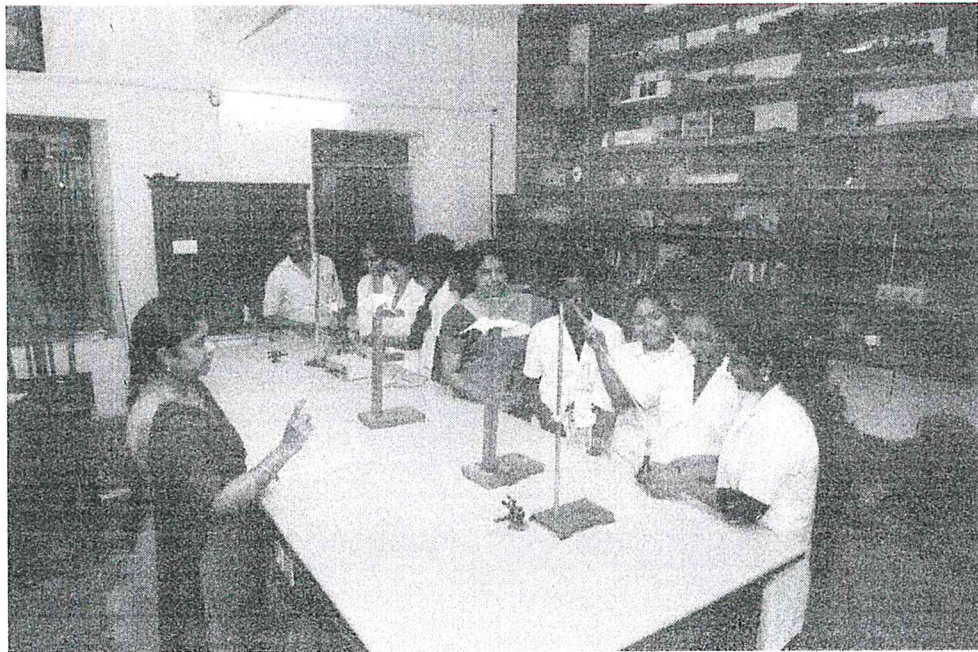
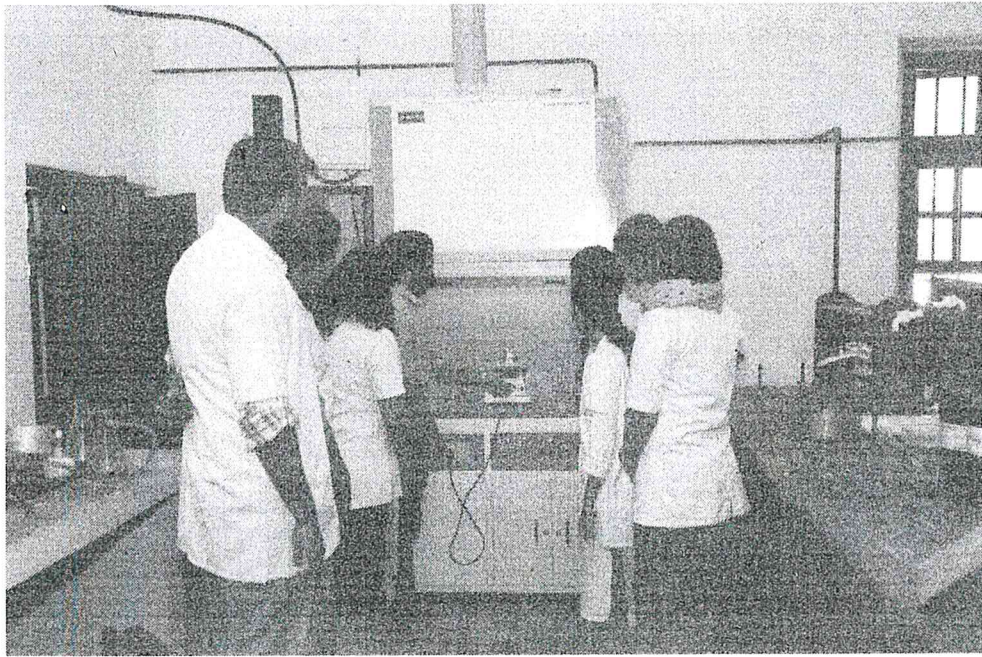
11	CP20LSRM11	Preethy Mol P	Star House Keralapuram Perumpuzha P O 691504	Qualified
12	CP20LSRM12	Revathi Janakan	Meenathethil Neendakara Puthenthura 691582	Qualified
13	CP20LSRM13	Sanjana. B. Unni	Perumathiyil Mukhathala Mukhathala 691577	Qualified
14	CP20LSRM14	Sreekuttan A	Mohana Vilasam Mukhathala Mukhathala 691577	Qualified
15	CP20LSRM15	Sreelekshmi .S	Sreemandiram Kottarakkara P O Kottarakkara P O 691506	Qualified
16	CP20LSRM16	Swathy . S	Kochuveetil S S Sadanam Edappallycotta P O Edappallycotta P O 691583	Qualified
17	CP20LSRM17	Varsha Prakash	Lekshmi Vilas Beach Road Chinnakada 691001	Qualified
18	CP20LSRM18	Vishnupriya.A.K	Anil Bhavan Kootikkada Kootikkada.P.O 691020	Qualified
19	CP20LSRM19	Ajeesha . S	Ratheesh Bhavan Chathanpara Alamcode P O 695102	Qualified
20	CP20LSRM20	Bhagya Prakash	Thiruvonam Kalluvathukkal Kalluvathukkal P O 691578	Qualified



MARK LIST OF STUDENTS OF CERTIFICATE COURSE 2020-2021**Lab Safety Rules and Methods**

Sl. No	Name	Marks of the Examination Theory (out of 100)	Grade
1	Archa Babu	96	A+
2	Ardra M J	92	A+
3	Balu. A	97	A+
4	Govardhan.S	98	A+
5	Krishnanunni M	97	A+
6	Krishnaraj T S	93	A+
7	Layanya M A	95	A+
8	Megha Rajesh	97	A+
9	Melani P Siva	98	A+
10	Parvathy. S. R	91	A+
11	Preethy Mol P	93	A+
12	Revathi Janakan	98	A+
13	Sanjana. B. Unni	94	A+
14	Sreekuttan A	96	A+
15	Sreelekshmi .S	93	A+
16	Swathy . S	97	A+
17	Varsha Prakash	98	A+
18	Vishnupriya.A.K	94	A+
19	Ajeesha . S	97	A+
20	Bhagya Prakash	98	A+





Final report

Short-term certificate programmes were offered to students by the PG & Research Department of Chemistry at SN College Kollam with the main objective of improving their academic curricula. The goal of this certificate programme in lab safety rules and methods is to familiarize the students with the variety of risks involved in chemical sciences research.

Twenty of the 22 applicants were chosen for the course. Expert teachers from the chemistry department led the classes. This course has given the students a fundamental understanding of laboratory safety and an awareness of any potential risks they might encounter while working there.

The students now understand the need of safety when handling potentially dangerous materials and other lab dangers after finishing the course. In order to protect their safety while working in the lab, students will benefit from this course's ability to identify hazards, assess the dangers posed by various chemicals and equipment, take the appropriate precautions, and put safety regulations into practise. They can now practise safety precautions and handle chemicals and lab equipment using the applied techniques. All of the chosen candidates successfully completed the certificate programme. All of the students received A+ ratings on a final exam.


Principal
Sree Narayana College
Kollam





SREE NARAYANA COLLEGE KOLLAM

DEPARTMENT OF CHEMISTRY

CERTIFICATE COURSE IN LAB SAFETY RULES AND METHODS

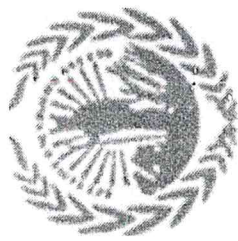
This is to certify that Mr./Ms./Mrs. GOVARDHAN.S Department of Chemistry has successfully completed Certificate Course in "LAB SAFETY RULES AND METHODS" during

the Academic Year 2020-2021



Course Coordinator

Principal



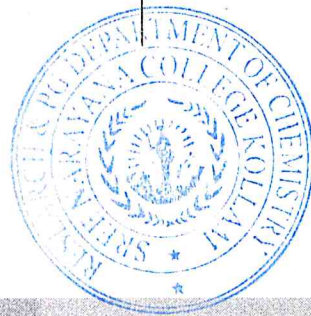
SREE NARAYANA COLLEGE KOLLAM

DEPARTMENT OF CHEMISTRY

CERTIFICATE COURSE IN LAB SAFETY RULES AND METHODS

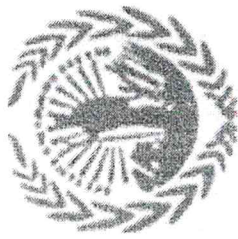
This is to certify that Mr./Ms./Mrs. BALU. A Department of Chemistry has
successfully completed Certificate Course in "LAB SAFETY RULES AND METHODS" during

the Academic Year 2020-2021



Course Coordinator

Principal



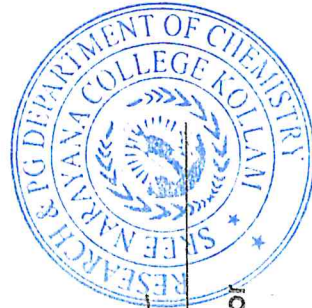
SREE NARAYANA COLLEGE KOLLAM

DEPARTMENT OF CHEMISTRY

CERTIFICATE COURSE IN LAB SAFETY RULES AND METHODS

This is to certify that Mr./Ms./Mrs. ARDRA M J Department of Chemistry has successfully completed Certificate Course in "LAB SAFETY RULES AND METHODS" during

the Academic Year 2020-2021



Course Coordinator

Principal



SREE NARAYANA COLLEGE KOLLAM

DEPARTMENT OF CHEMISTRY

CERTIFICATE COURSE IN LAB SAFETY RULES AND METHODS

This is to certify that Mr./Ms./Mrs. ARCHA BABU Department of Chemistry has

successfully completed Certificate Course in "LAB SAFETY RULES AND METHODS" during

the Academic Year 2020-2021

Course Coordinator



Principal