

N. S. S COLLEGE NEMMARA

DEPARTMENT OF CHEMISTRY

ANNUAL REPORT FOR THE ACADEMIC YEAR 2023-24

1. DETAILS OF FACULTY

Serial No.	Name	Designation	Date of Joining	Experience
1	Dr Ambili V K	Assistant Professor and Head	06-03-2014	10 Years
2	Dr Priya S	Assistant Professor	07-07-2014	9 Years
3	Dr Asha Bharathan	Assistant Professor	16-12-2013	10 Years
4	Dr Anoop S Nair	Assistant Professor	06-12-2018	5 Years
5	Dr Viji M	Assistant Professor on contract	05-06-2023	5 Years
6	Mrs Reshma M	Assistant Professor on contract	05-06-2023	4 Years
7	Dr Haripriya M	Assistant Professor on contract	05-06-2023	2 Years
8	Mrs Anumol P	Assistant Professor on contract	01-08-2023	2 Years

2. NUMBER OF SANCTIONED POSTS: 8

3. TEACHERS RETIRED AND JOINED IN THE YEAR: NIL

4. TEACHERS ON CONTRACT: 4

Serial No.	Name	Date of Joining the institution	Total Teaching Experience
1	Dr Viji M	05-06-2023	5 Years
2	Mrs Reshma M	05-06-2023	4 Years
3	Dr Haripriya M	05-06-2023	2 Years
4	Mrs Anumol P	01-08-2023	2 Years

5. QUALIFICATIONS OF THE TEACHING STAFF

Highest qualification	Assistant Professor		Total
	Male	Female	
PERMANENT TEACHERS			
Ph.D.	1	3	4
TEMPORARY TEACHERS			
Ph.D		2	4
PG		2	

6. TEACHERS RECOGNIZED AS RESEARCH GUIDES & NUMBER OF STUDENTS

Serial No.	Name of Teacher	No. of Students
1	Dr Priya S	Nil

7. TEACHERS WITH OTHER/ ADDITIONAL QUALIFICATIONS (OTHER THAN PH.D, M.PHIL)

Serial No.	Name of Teacher	Specify Additional Qualification
1	Dr Ambili V K	B.Ed.
2	Dr Priya S	B.Ed.
3	Mrs. Reshma M	B.Ed.
4	Mrs. Anumol P	B.Ed.

8. PUBLICATIONS/SEMINARS/WORKSHOPS

No.	Name of Teacher	Journal papers	Paper Presentations	Seminar/workshop
1	Dr Priya S	1		
2	Dr Anoop S Nair	4	1	
3	Reshma M	1		

Journal Papers

1. **M. Reshma** and R. Manu, Development of Pd@MWCNT-Co₃O₄ Electrode Sensors Using Cobalt Recovered from Spent Lithium Ion Batteries, *Journal of Electrochemical Society*, 2023 170 077507 DOI: 10.1149/1945-7111/ace5e6.
2. Padmanabhan Kavya, **Sudhesh Priya**, Kannan Pradeesh, Kulangara Sandeep and Madhavan Shanthil, Thin silica shell on Ag₃PO₄ nanoparticles augments stability and photocatalytic reusability, *RSC Advances*, 2023
3. R Reshmi, K R Jiju, S Suma, **Anoop S. Nair**, Folic Acid grafted aminated zeolitic framework (ZIF-8) as pH responsive drug carrier for targeted delivery of curcumin, *Journal of Drug Delivery Science and Technology*, 79, 104098, 2023.
4. Faseela Kasim, Archana S. Nair, Aswathy L B, Sooraj M P, **Anoop S. Nair**, Preparation, Characterization and evaluation of a novel drug carrier for the controlled release of curcumin, *Drug Research*, 73 (04), 224 – 231, 2023.
5. PPNC Kumari, H Asadevi, P S Vindhya, V T Kavitha, **Anoop S. Nair** and Resmi Reghunandan, Development of a Cu/ZnO @ZIF-8 nanocomposite as a pH responsive drug delivery vehicle for the sustained release of doxorubicin in human lung cancer cell lines, *Journal of Drug Delivery Science and Technology*, 90, 105147, 2023.
6. Jiju K R, S Suma, **Anoop S. Nair**, R Ramachandran, Curcumin –loaded chitosan –coated 5-fluorouracil encapsulated nanozeolitic imidazolate framework for combination cancer therapy, *Journal of Pharmaceutical Innovation*, 18 (4), 2043 – 2053, 2023.

Paper Presentations

1. **Anoop S. Nair**, “Understanding of some non-conventional routes of Drug Administration Materials” Invited Lecture at II International Meet on Medicinal Chemistry, Drug Discovery and Drug Delivery (MEDCHEMMEET 2023), France held during June 08, 2023.

9. FACULTY AS MEMBERS IN:

Academic council / BoS of Affiliating University, Setting of question papers for UG/PG programs, Design of Curriculum for Add on / certificate / Diploma Courses, Assessment /evaluation process of the affiliating University:

Serial No.	Name of Teacher	Name of Council/Body/ evaluation etc.
1	Dr Ambili V K	PG BoS of Chemistry University of Calicut Assessment /evaluation process of University of Calicut
2	Dr Priya S	Question Paper setter University of Kerala Assessment /evaluation process of University of Calicut
3	Dr Anoop S Nair	Question Paper setter University of Kerala Assessment /evaluation process of University of Calicut Coordinator of Certificate Course in Chemistry
4	Dr Asha Bharathan	Assessment /evaluation process of University of Calicut
5	Dr Viji M	Assessment /evaluation process of University of Calicut
6	Mrs Reshma M	Assessment /evaluation process of University of Calicut
7	Dr Haripriya M	Assessment /evaluation process of University of Calicut
8	Mrs Anumol P	Assessment /evaluation process of University of Calicut

10. LIST OF LMS TOOLS USED BY EACH TEACHER FOR EFFECTIVE TEACHING-LEARNING PROCESS

LCD projector, Google classroom etc.

11. TEACHERS UNDERGOING ONLINE/ FACE-TO-FACE FACULTY DEVELOPMENT PROGRAMMES (PROFESSIONAL DEVELOPMENT PROGRAMMES, ORIENTATION / INDUCTION PROGRAMMES, REFRESHER COURSE, SHORT TERM COURSE ETC.)

No.	Name of Teacher	Title of Course	Type of Course & Agency	Duration of Course
1	Dr Asha Bharathan	UGC Sponsored Online Refresher Course in Environment & Sustainable Development (Multidisciplinary)	Online UGC Sponsored Refresher Course conducted by UGC-HRDC Bharathidasan University	08 – 12 - 2023 to 21 – 12 - 2023

12. DETAILS OF STUDENTS

Demand Ratio During The Year				
Programme	Category	Number of seats available	Number of applications received	Students Enrolled
UG	OPEN	15	925	15
	SC	4	116	4
	ST	1	4	1
PG		17		12

13. NUMBER OF SANCTIONED SEATS UNDER DIFFERENT CATEGORY FOR UG AND PG

Program	General Merit	Community	Management	SC	ST	Sports	Differently Abled	Others: Specify	Total
UG	15	03	06	04	01	02+01	01	01	34
PG	08	01	02	02	01	01	01	01	17

14. DETAILS OF ADMISSION/ STUDENTS ENROLLED

UG	I YEAR		II YEAR		III YEAR		TOTAL
	GIRLS	BOYS	GIRLS	BOYS	GIRLS	BOYS	
SC	01	03	04	00	01	03	12
ST	00	01	00	01	00	00	02
OPEN	14	01	11	04	11	01	42
MANAGEMENT	02	01	04	02	04	01	14
COMMUNITY	01	00	00	00	02	00	03
OTHERS – SPORTS	00	00	00	02	00	00	02
TOTAL	18	06	19	09	18	05	75

PG	I YEAR		II YEAR		TOTAL
	GIRLS	BOYS	GIRLS	BOYS	
SC	00	01	01	00	02
ST	00	00	00	00	00
OPEN	06	02	06	01	15
MANAGEMENT	02	00	03	00	05
COMMUNITY	01	00	00	01	02
OTHERS	00	00	00	00	00
TOTAL	09	03	10	02	24

15. DETAILS OF SCHOLARSHIP

Students benefited by scholarships and free-ships and Endowments provided by the Government or Institution:

Name of Scholarship/Freeship/Endowment	Whether by Govt. or Institution	Amount	No. of Students benefitted		
			1 Yr	2 Yr	3 Yr
Postmetric Scholarship General	Govt		3	4	1
Postmetric Scholarship OBC	Govt		-	-	5
Postmetric Scholarship SC	Govt		3	5	2
Postmetric Scholarship ST	Govt		1		

16. STUDENTS RECEIVED AWARDS/PRIZES FOR SPORTS, GAMES AND CULTURAL ACTIVITIES AT COLLEGE, UNIVERSITY, STATE, NATIONAL & INTERNATIONAL LEVELS

Serial No.	Name of the Student	Activity	Recognition	Level
1.	Kavya P J	Scholarship	Chief Minister's Scholarship of Meritorious students with one lakh rupees	State
2.	Nimisha S	Guinness Asian, British and Indian World Record	International Carnatic Musician & Dancers Association Award for performing dance, music and drawing by most people	International
3.	Jishna P	NCC Medal	Best Cadet and Best Drill award by 27 Kerala Battalion, Palakkad	Regional
4.	Mohammed Roshan K	Sports Medal	Medals in Intercollege Judo and Wrestling championship, Kerala State Junior Wrestling and Judo Championship.	State
5.	Nithin K	Sports Medal	Weight Lifting Runner up	District
6.	Nikhil M	Sports Medal	Best Goal Keeper Award	College

17. TOTAL NUMBER OF FINAL YEAR STUDENTS WHO APPEARED FOR THE UNIVERSITY EXAMINATION AND PASSED: (PROOF ATTACHED)

Program	Number of students in the class	Number of students Registered	Number of students appeared	Number of students passed	% students passed
UG	28	26	26	21	80.8
PG	11	11	11	11	100

18. LIST OF TOPPERS:

Program	Name	CGPA and %
UG	Amogha P	9.2 and 92.00
PG	Roshni C	4.17 and 83.40

19. NUMBER OF OUTGOING STUDENT PROGRESSION TO HIGHER EDUCATION THIS YEAR:

Course	No of Students
Integrated PhD	1
PG	9
BEd	1
Job	4
JAM	
NET/GATE	1
SET	2
PhD	1
Others	

Name of student enrolling into higher education	Program graduated from	Name of institution joined	Name of programme admitted to
Bhagyasree M	BSc Chemistry	IISER Trivandrum	Integrated PhD
Ansiya S	BSc Chemistry	NSS College Nemmara	MSc Chemistry
Arya U	BSc Chemistry	NSS College Nemmara	MSc Chemistry
Silpa S	BSc Chemistry	NSS College Nemmara	MSc Chemistry
Gopika P	BSc Chemistry	NSS College Nemmara	MSc Chemistry
Manya M	BSc Chemistry	NSS College Nemmara	MSc Chemistry
Amogha P	BSc Chemistry	NSS College Nemmara	MSc Chemistry
Muhsina S	BSc Chemistry	Jawaharlal College of Engineering and Technology	MBA
Praveena C	BSc Chemistry	Chandigarh University	MSc Chemistry
Nandhana K	BSc Chemistry	Jawaharlal College of Engineering and Technology	MBA
Shirin S	BSc Chemistry	Calicut University Teacher Education Centre Koduvayoor	BEd
Namitha M	MSc Chemistry	PPD Pharmaceuticals	Technical Assistant
Gopika U	MSc Chemistry	Sreepathy Institute of Management and Technology	Assistant professor in Chemistry

Abhijith M	MSc Chemistry	GATE Qualified	Chemistry
Arun Krishnan V	MSc Chemistry	University of Berlin	PhD in Chemistry
Abhilash C	BSc Chemistry	Indian Army	
Arun Kumar M A	BSc Chemistry	Indian Army	
Sreelaksmi S	MSc Chemistry	SET Qualified	Chemistry
Anushya Devadas Nair	MSc Chemistry	SET Qualified	Chemistry

20. COURSES OFFERED IN 2023-24 (ACROSS ALL PROGRAMMES & ALL SEMESTERS)

BSc Chemistry
MSc Chemistry
Subsidiary Course for Botany, Physics and Zoology
Open Course
Certificate Course

21. THE LIST AND DESCRIPTION OF COURSES WHICH ADDRESS PROFESSIONAL ETHICS, GENDER, HUMAN VALUES, ENVIRONMENT AND SUSTAINABILITY IN THE CURRICULUM

Programme	Semester	Code of Course	Title of Module/ Chapter	Theme Addressed
BSc Chemistry	5	CHE5B06	Environmental pollution, Solid waste Management	Environmental issues
BSc Chemistry Subsidiary	4	CHE4C04	Environmental pollution, Green Chemistry	Environmental issues

22. NUMBER OF STUDENTS UNDERTAKING PROJECT WORK/FIELD WORK / INTERNSHIPS:

	Number of Students	
	UG	PG
Project work	18	12
Field work	18	
Internships		

23. STUDENT PROJECT 2023-24

Name of teacher	Project title
Dr Ambili V K	Photocatalytic Degradation Studies of Methylene Blue by Green Synthesized Zinc Oxide Nanoparticles
Dr Priya S	Corrosion Inhibition Characteristics of Methylene Blue and Polyvinyl Pyrrolidone on corrosion control of mild steel in saline solution
Dr Asha Bharathan	Determination of TFM and alkali content in various samples of Toilet Soaps
Dr Anoop S Nair	Evaluation of Carboxyl Functionalized Zinc Oxide Nanoparticles as a Swelling Matrix for Drug Delivery Applications
Dr Viji M	Determination of Acid Neutralization Capacity of Different Antacid Tablets
Mrs Reshma M	Determination of Acid Neutralization Capacity of Different Antacid Tablets
Dr Haripriya M	Extraction of Pectin from Waste Orange peels and Characterizing its Physiochemical properties
Mrs Anumol P	Extraction of Pectin from Waste Orange peels and Characterizing its Physiochemical properties

24. DEPARTMENT TIME TABLE (COPY ATTACHED)

25. INTERNAL EXAMINATIONS:

Semester	Date
5 th Semester	11.09.2023 to 14.09.2023
3 rd Semester	16.10.2023 to 20.10.2023
1 st Semester	08.01.2024 to 15.01.2024
6 th Semester	05.02.2024 to 09.02.2024
4 th Semester	26.02.2024 to 01.03.2024

26. TUTORIAL MEETINGS

Name of the tutor & class:

Dr Priya S - V and VI Semester BSc chemistry

Dr Anoop S Nair - III and IV Semester BSc chemistry

Dr Ambili V K - I and II Semester BSc chemistry-

Dr Asha Bharathan - I and II Semester

Dr Asha Bharathan - III and IV Semester MSc chemistry

Dates of tutorial meeting

Tutorial meeting is conducted on first Tuesday every month.

I Sem	II Sem	III Sem	IV Sem	V Sem	VI Sem
5.9.23	9.1.24	5.8.23	5.12.23	5.8.23	5.12.23
3.10.23	6.2.24	3.9.23	9.1.24	3.9.23	9.1.24
21.11.23	19.3.24	3.10.23	6.2.24	3.10.23	6.2.24
5.12.23			5.3.24		

27. PTS MEETINGS

PTS Meetings	
Semester	Date
I & II	12-01-2024
III& IV	19-12-2023
V&VI	19-12-2023

28. BRIDGE COURSE

Bridge Course was given to first semester BSc chemistry students from 01/09/2023 to 29/09/2023 and an exam was conducted on 30/10/2023. 25 students appeared for the exam and out of this 07 were slow learners, 05 students were advanced learners and 12 students were medium level learners. 01 student was absent for the exam.

29. REMEDIAL COACHING

Remedial classes were given every year in every semester for core subject from first to fourth semesters. For first semester students, classes were arranged for slow learners. Remedial classes were taken for fifth and sixth semester on subjects suggested by students. Classes were taken for students with lowest internal marks for the exams conducted from second semester onwards.

Year	Students Enrolled
I Semester UG	07
II Semester UG	07
III Semester UG	09
IV Semester UG	09
V Semester UG	07
VI Semester UG	06

30. PEER TEACHING

Peer teaching classes were taken by the III year B.Sc. students on 20/10/2023, 25/10/2023, 26/10/2023 and 27/10/2023.

Serial No.	Name of Student	Date of Peer Teaching
1.	Sanika K	20/10/2023
2.	Mridhula S	20/10/2023
3.	Sulaika S	20/10/2023
4.	Nimisha S	25/10/2023
5.	Hashitha K	25/10/2023
6.	Sanfiya S	25/10/2023
7.	Rinsha V H	26/10/2023
8.	Krishnapriya P	26/10/2023
9.	Nandana R	26/10/2023
10.	Anagha M	27/10/2023
11.	Nandana K S	27/10/2023
12.	Aparna S	27/10/2023

31. PROGRAMMES FOR ADVANCED LEARNERS

Exhibition, PowerPoint Presentations, Books supplied for additional references, Seminars and workshops were conducted by the Department.

32. CERTIFICATE COURSE OF THE DEPARTMENT

A certificate course entitled “Material Safety and Laboratory Precautions” was conducted by the Department of Chemistry from January 2024. A total of 71 students enrolled in the course. 30 hours are scheduled to be completed within March 2024 in hybrid mode. Lectures on PPE kit, MSDS data sheet, material sign and symbols, etc. were discussed in the classes followed by a regular quiz. On successful completion of the course, certificates will be provided to all students.

DEPARTMENT ACTIVITIES

33. NUMBER OF WORKSHOPS/SEMINARS CONDUCTED ON RESEARCH METHODOLOGY, INTELLECTUAL PROPERTY RIGHTS (IPR) AND ENTREPRENEURSHIP

Title of Seminar/workshop	Thrust area	Whether funded	Number of Beneficiaries
Seminar on Research Methodology and Career Guidance	Research Methodology	No	54
Soap Making workshop	Entrepreneurship	No	28
Seminar on Career Guidance and Research opportunities	Career Guidance	No	30

34. COLLABORATIVE ACTIVITIES FOR RESEARCH, FACULTY EXCHANGE, STUDENT EXCHANGE/ INTERNSHIPS

Title of Activity	Type of Activity	Whether funded	No. of Beneficiaries
Research collaboration	Characterization	No	3
Student Exchange	Project work	No	3
Field Visit	Industrial Visit	No	18
Seminar presentations in association with PG Forum	Paper Presentations by PG students	No	24
Seminar presentations in association with Academic and Research committee	Paper Presentations by UG students	No	60

35. EXTENSION ACTIVITIES IN SENSITIZING STUDENTS ABOUT SOCIAL ISSUES AND HOLISTIC DEVELOPMENT

- Chemistry students conducted chemistry exhibition for the students of nearby schools
- Soaps manufactured by the students of Chemistry Department were distributed within and outside college campus

36. MOU SIGNED

1. MoU Signed between N.S.S. College Nemmara and Mercy College, Palakkad
2. Collaboration Signed between Department of Chemistry, N.S.S. College Nemmara and NIT Trichy

37. INFRASTRUCTURE AND PHYSICAL FACILITIES FOR TEACHING-LEARNING

Facility	Number
Classroom	2
Laboratory	2
Research Facilities	UV-Visible Spectrophotometer Photo Reactor Sonicator Cooling Centrifuge Magnetic Stirrers Hot air Oven Muffle Furnace Autoclave Heating Mantles Vapour Phase Reactor