

NAAC REACCREDITED WITH 'A' GRADE

Sevadal Mahila Mahavidyalaya

Place For Higher Learning & Research (Research Academy)

Sakkardara Square, Umrer Road, Nagpur - 440024 (M.S.)

Phone No.: 0712-2705037, 2752344 Fax.: 0712-2705037

E-mail: sevamahilamv@gmail.com; smm_college@yahoo.co.in

Website: <https://sevadalimahilamahavidyalaya.ac.in>

5.1.3 Capacity building and skills enhancement initiatives

LIFE SKILLS

(Yoga, physical fitness, health and hygiene)



Academic Session: 2023-2024



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Sevalal Mahila Mahavidyalaya

Place for Higher Learning & Research (Research Academy)

Sakkardara Square, Umrer Road, Nagpur-440 024

E-mail : sevamahilamv@gmail.com

Website: www.sevalalmahilamahavidyalaya.ac.in

Report of Certificate Course in 'Clinical Microbiology'

Course Coordinator

Dr. (Mrs). Seema R. Nimbarte

Associate Professor

Department of Microbiology

Academic Session: 2023-2024

Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.



Course Title: Clinical Microbiology

About the Course:

Clinical Microbiology courses teach students about the biology and transmission of pathogens, as well as how to diagnose, treat, and prevent infectious diseases. The program is designed to create expertise in laboratory diagnosis of human diseases caused by bacteria, viruses, fungi, and parasites.

The course is designed to impart students' theoretical and practical knowledge of Bacteriology, Mycology, Virology and Parasitology.

Course Outline:

The course includes Historical development in Bacteriology, Classification of Pathogenic bacteria (outline), General methods of isolation and identification of pathogenic bacteria. Study of infections associated with various bacteria, fungi, viruses and protozoans.

Students will learn to collect, preserve and process blood, stool, urine, semen and CSF.

Course Outcome:

The students will be able to learn and understand :

1. Essential facts, concepts, principles and theories relating to subject areas.
2. Pathogenicity and laboratory diagnosis of various bacterial, fungal, viral and parasitic infections.
3. Microbiological examination of urine culture, blood culture, sputum, CSF and stool.
4. Different methods of isolating pure culture of the infectious microorganisms.
5. Antimicrobial susceptibility testing.
6. Students will be able to work as technician in Microbiology laboratory.
7. Students will also be able to work as laboratory technician in different pathologies and multi-speciality hospitals.
8. The students will develop ability to communicate effectively in both oral and written contexts in the form of technical papers, project reports, design documents and seminar presentations.



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Sakkardara Square, Umrer Road, Nagpur-440024

Date : 08/01/2024

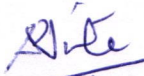
NOTICE

All the members of the Department of Microbiology are hereby informed that the meeting regarding the discussion of starting the Certificate Course in the Department will be held on 10-01-2024 at 12.30 pm. in the chamber of Hon'ble Principal. All the members are requested to remain present for the meeting.

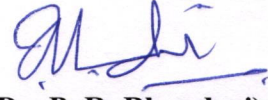
Hon'ble Principal will chair the meeting in presence of Dr. A. P. Lambat, NAAC Coordinator.

Agenda of the meeting:

- 1) To start Certificate course in Microbiology.
- 2) To discuss regarding theme/title of the course, date of commencement and framing the syllabus.
- 3) Any other matter with the permission of the Chair.



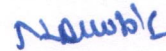
(Dr. Mrs. S. R. Nimbarte)
Assistant Professor,
Department of Microbiology
Sevadal Mahila Mahavidyalaya,
Nagpur



(Dr. P. R. Bhandari)
Head,
Department of Microbiology
Sevadal Mahila Mahavidyalaya,
Nagpur

Copy to:

Dr. A. P. Lambat, NAAC Coordinator



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Minutes of the Meeting

Certificate Course

The meeting regarding starting the certificate course was held on 10-01-2024 at 12.30 pm. in the chamber of Hon'ble Principal. Hon'ble Principal presided over the meeting.

Agenda of the Meeting:

- 1) To start Certificate Course in Microbiology.
- 2) To discuss regarding theme/title of the course, date of commencement and framing the course syllabus.
- 3) Any other matter with the permission of the Chair.

Following Members were present.

- | | | | |
|----|-------------------------|---|-------------------------------------|
| 1) | Prof. Pravin Charde | - | Principal- Chairman |
| 2) | Dr. A. P. Lambat | - | NAAC Coordinator |
| 3) | Dr. P. R. Bhandari | - | Head, Dept. of Microbiology, Member |
| 4) | Dr. Mrs. Seema Nimbarte | - | Course Coordinator |
| 5) | Dr. (Mrs.) K. V. Dubey | - | Member |

Dr. (Mrs). Seema Nimbarte, Course Coordinator acted as secretary in the meeting. The Coordinator welcomed the Chairperson, Hon'ble Principal and other members and called the meeting in order with the permission of Chairperson. The Coordinator read out the agenda of the meeting and subsequently discussed the matter.

Item No. 1: To start Certificate course in Microbiology.

Resolution: It was unanimously decided to start new Certificate Course in the Department of Microbiology under the Co-ordinatorship of Dr. Seema Nimbarte.



Seema


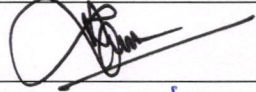
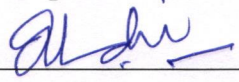
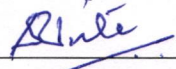
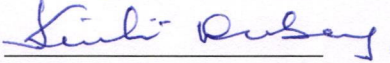
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Item No. 2: To discuss regarding theme/title of the course, date of commencement and framing the course syllabus.

Resolution: Unanimously it was decided to commence the Certificate Course in "Clinical Microbiology" in the Department of Microbiology from February 2024 for the session 2023-24. It was further decided that the Syllabus of the course will be designed by Dr. Seema Nimbarte, who will be the Course Coordinator.

Item No. 3: Any other matter with the permission of Chair.

Resolution: As there was no other matter for further discussion the meeting ended with vote of thanks.

	Name	Signature
1.	Hon'ble Prof. Pravin Charde	
2.	Dr. A. P. Lambat	
3.	Dr. P. R. Bhandari	
4.	Dr. (Mrs.) S. R. Nimbarte	
5.	Dr.(Mrs.) K.V.Dubey	



Seema Nimbarte
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Date : 10/01/2024

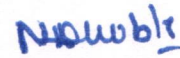
NOTICE

All the students of the B.Sc. Microbiology are hereby informed that a Certificate Course in "Clinical Microbiology" is started by the Department of Microbiology of the college from the Session 2023-2024. The course is commencing from 1st February 2024.

Interested students can register their names with Dr. (Mrs). S. R. Nimbarte.



Prof. Pravin Charde
Principal
Sevadal Mahila Mahavidyalaya
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Date : 04.04.2024

NOTICE

All the Members of the Department of Microbiology are hereby informed that the second meeting of the session regarding the Certificate Course in "Clinical Microbiology" will be held on 06-04-2024 at 12.30 pm in Hon'ble Principal's Chamber. All the members are requested to remain presents for the meeting.

Hon'ble Principal will chair the meeting in presence of Dr. A.P. Lambat, NAAC Coordinator.

Agenda of the meeting:

- 1) To confirm the minutes of last meeting.
- 2) To discuss about the progress of Certificate Course in "Clinical Microbiology" and its examination schedule.
- 3) Any other matter with the permission of the Chair.

(Dr. Mrs. S. R. Nimbarte)

Course Coordinator
Department of Microbiology
Sevadal Mahila Mahavidyalaya,
Nagpur

(Dr. P. R. Bhandari)

Head,
Department of Microbiology
Sevadal Mahila Mahavidyalaya,
Nagpur

Copy to:

Dr. A. P. Lambat, NAAC Coordinator



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Minutes of the Meeting

Certificate Course in "Clinical Microbiology"

The meeting regarding the Certificate Course in "Clinical Microbiology" will be held on 06-04-2024 at 12.30 pm in the Hon'ble Principal's Chamber. Hon'ble Principal presided over the meeting.

Agenda of the Meeting:

1. To confirm the minutes of last meeting.
2. To discuss about the progress of Certificate Course in "Clinical Microbiology" and its examination schedule.
3. Any other matter with the permission of the Chair.

Following Members were present.

- | | | | |
|----|---------------------------|---|--------------------------------------|
| 1. | Prof. (Mrs.) N. S. Dhoble | - | Principal-Chairman |
| 2. | Dr. A. P. Lambat | - | NAAC Coordinator |
| 3. | Dr. P. R. Bhandari | - | Head, Dept. of Microbiology & Member |
| 4. | Dr.(Mrs.) S. R. Nimbarte | - | Course Coordinator |
| 5. | Dr.(Mrs.) K. V. Dubey | - | Member |

Mrs. Seema Nimbarte, Course Coordinator acted as secretary in the meeting. The Coordinator welcomed the Chairperson, Hon'ble Principal and other members and called the meeting in order with the permission of chairperson. The Coordinator read out the agenda of the meeting and discussed the points according to the agenda of the meeting.

Item No. 1: To confirm the minutes of last meeting.

Resolution: The minutes of the last meeting held on 10/01/2024 were read by the course coordinator and after thorough discussion the minutes were unanimously approved.



M. Dhoble

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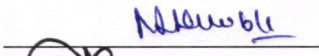
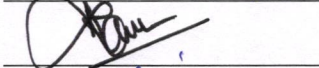
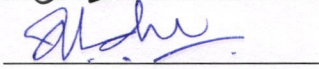
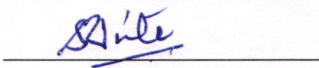
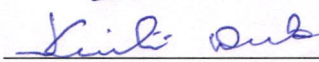
Item No. 2: To discuss about the progress of Certificate course in 'Clinical Microbiology and examination schedule.

Resolution: Course Coordinator informed about the progress of the course and the percentage of course completed and also that the exams will be conducted in the last week of the month. It was approved unanimously.

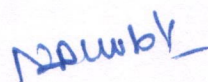
Item No. 3: Any other matter with the permission of Chair.

Resolution: Hon'ble Principal instructed to conduct the examination and get the certificates duly signed and distribute the certificates to the students after successful completion of the course.

There was no other matter for further discussion so the meeting ended with vote of thanks.

Name	Signature
1. Prof. (Mrs.) N. S. Dhoble	
2. Dr. A. P. Lambat	
3. Dr. P. R. Bhandari	
4. Dr. (Mrs.) S. R. Nimbarte	
5. Dr. (Mrs.) K. V. Dubey	




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Theory Syllabus

Syllabus: (Total 50 hrs including Teaching, Lab, and Field visits)

Unit I - Clinical Bacteriology

Historical development in Bacteriology, Classification of Pathogenic bacteria (outline), General methods of isolation and identification of pathogenic bacteria. Study of infections associated with following Gram-positive bacteria – *Clostridium*, *Pneumococcus*, *Corynebacterium*, *Streptococci*, *Staphylococci*.

Study of infections associated with following Gram-negative bacteria — *Salmonella*, *Klebsiella*, *Proteus*, and *Escherichia*. *Vibrio*, *Pseudomonas*, *Neisseria*.

Study of infections associated with Mycoplasma, *Mycobacterium tuberculosis* and *Mycobacterium leprae*.

Unit II - Clinical Mycology and Virology

Classification of Medically important fungi. General identification process of medically important fungi. Study of superficial fungal infections (Trichophyton mycoses). Classification of animal viruses. Isolation, identification, and cultivation of animal viruses. Study of DNA viruses- Poxvirus, Herpes virus, Adeno virus, Hepatitis B virus.

Study of RNA viruses – Retrovirus, Picorna virus, Paramyxo virus.

Unit III - Clinical Parasitology

Classification and Brief history of Protozoa and helminthic infections – mechanism of disease production by parasites. Etiology, Pathogenesis, Clinical diagnosis of following protozoans – *Entamoeba histolytica*, *Leishmania*, and *Plasmodium* Etiology, Pathogenesis, Clinical diagnosis of following nematodes – *Ascaris lumbricoides* and *Wucheria bancrofti*.

Unit IV - Clinical Pathology

Composition of urine, Microbiological examination of urine, clinical significance of urine analysis.

Composition of CSF, Microbiological examination of CSF, clinical significance of CSF analysis.

Composition of Semen, Microbiological examination of semen, clinical significance of semen analysis.

Composition of sputum, Microbiological examination of sputum, clinical significance of sputum analysis.

Microbial examination of blood (Blood culture). Routine stool analysis.



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Practical syllabus:

1. Streak plate and pour plate method for isolation of pure culture of bacteria.
2. Gram staining.
3. Acid fast staining (for detection of Mycobacteria in sputum).
4. Microbiological examination of urine & antibiotic susceptibility testing.
5. Microbiological examination of pus.
6. Microbiological examination of CSF and Semen.
7. Microbiological examination of blood & antibiotic susceptibility testing.
8. Microscopic examination of stool.
9. Detection of malarial parasite
10. Detection of viral infection – HIV, Hepatitis.

Teaching Methodologies

- The course will be taught through both teaching of theory and Practical classes using chalk board, power point presentation mode as per the requirement of the syllabus.
- Lecture hours: 30 Hour
- Practical hours: 20 Hour
- Guest Lecture/ Seminar/ Workshop/ Field visit: 10 Hour
- Exam pattern: Offline: Theory -03 Hour and Practical Examination- 06 Hour
- Attendance: 75 % of attendance is compulsory

Proposed Guest Lectures and Workshops:**(10 Hour)**

Guest lectures by eminent scientists, clinicians and teachers working in the field of Clinical Microbiology and experts will be invited for hands on training of laboratory diagnosis and identification of infectious agents causing bacterial, fungal, viral and parasitic infections.

- Visit to hospitals, pathology laboratories and Diagnostic centres.
- Submission of field work report in the prescribed format by the students.
- Suggested format for field work book; Title page, student details, content page, introduction, work done, findings, conclusion and acknowledgments.

Assessment and Evaluation Methods:

Internal Assignments through seminars /group discussion on bio fertilizers and biopesticides.
(20 Marks)

Question Paper Pattern: Theory paper setting will be as per RTM Nagpur University pattern.

Max. Marks: 50 of three hours duration.

Practical Examination will be of Max. 30 marks, containing:

One long experiment - 10 marks

Two short experiments - 5 marks each

Practical Record -05

Viva-voce-05



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Learning outcomes:

On successful completion of the practical course, student shall be able to perform

1. Pathogenicity and laboratory diagnosis of various bacterial, fungal, viral and parasitic infections.
2. Microbiological examination of urine culture, blood culture, sputum, CSF and stool.
3. Different methods of isolating pure culture of the infectious microorganisms.
4. Antimicrobial susceptibility testing.
5. Students will be able to work as technician in microbiology laboratory.
6. Students will also be able to work as laboratory technician in different pathologies and multi-speciality hospitals.



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Sakkardara Square, Umrer Road, Nagpur-440024

Department of Microbiology Certificate Course in "Clinical Microbiology"

Academic session 2023-24

List of Students Enrolled in the Certificate Course

Sr. No.	Name of the Students
1	Aastha Pramod Karme
2	Divya Naresh Deokar
3	Gajiya Firdoj Jakir Sheikh
4	Harshada Shrikant Adgulkar
5	Janhavi Janardhan Paunikar
6	Janhavi Manojrao Khobragade
7	Kartiki Dhiraj Chavhan
8	Komal Raju Feddewar
9	Mehroze Ismail Qureshi
10	Muskan Alfiya Iqbal Khan
11	Palak Sandeep Jaiswal
12	Poonam Revnath Koparkar
13	Ragini Prabhakar Rehpade
14	Sakshi Prakash Dhomne
15	Saniya Virendra Admane
16	Sarvadhnya Satish Mendhekar
17	Sayali Kamlakar Rajurkar
18	Sayali Rajendra Gulhane
19	Shifa Saher S. Ahmed Sheikh
20	Shrutika BandujiMulkure
21	Suhani Girishchandra Bhure
22	Tanushree Akash Mohadikar
23	Vaishnavi Ajay Lutade
24	Yashashree Sheshrao Bhoyar



N. N. N.
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Seema R. Nimbarte
Dr. (Mrs). Seema R. Nimbarte
Associate Professor
Department of Microbiology



SEVADAL SHIKSHAN SANSTHA'S
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SEVADAL MAHILA MAHAVIDYALAYA
& RESEARCH ACADEMY

Sakkardara Square, Umrer Road, Nagpur-24

Attendance for the

Month of

To Lect
Prac
engr

Roll No.	NAME	Theory												Practical								Total Lect Prac attn																		
		1/2/2023	2/2	8/2	9/2	15/2	16/2	22/2	23/2	29/2	01/3	07/3	14/3	15/3	21/3	22/3	28/3	29/3	1/4	2/4	3/4		4/4	5/4	08/4	10/4	12/4	13/4	20/4	24/4	25/4	26/4								
1.	Aastha P. Karnic	A	P	A	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P										
2.	Divya N. Deokar	P	P	P	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P											
3.	Gajiyar Firdoz J. Sheikh	P	A	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	A	P									
4.	Harsada S. Adgulkar	P	A	P	A	A	P	A	P	A	P	P	P	P	P	A	P	P	P	P	A	P	P	A	P	P	P	A	P	P	P	P								
5.	Janharvi J. Pannikar	P	P	A	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P							
6.	Janharvi M. Khobragade	P	P	P	P	P	P	P	P	A	A	P	P	P	A	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P							
7.	Kartiki D. Chavhan	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P							
8.	Komal R. Feddewan	P	P	P	A	P	P	P	A	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P				
9.	Mehroze I. Gureshi	A	P	A	A	P	P	P	A	A	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P					
10.	Muskan Abiyat Khan	P	P	P	P	A	P	P	P	A	P	P	A	P	P	A	P	P	P	P	P	P	P	P	P	P	A	P	P	A	P	P	P	P	P	P				
11.	Palak S. Jainwal	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P				
12.	Peonam R. Koperkar	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P		
13.	Rajvi P. Rehpade	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
14.	Sanshi P. Dhemare	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P		
15.	Saniya V. Admane	P	P	P	A	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P		
16.	Sarvadhanya S. Mendhkar	P	A	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P		
17.	Sayani K. Rajurkar	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
18.	Sayani R. Gulhane	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	
19.	Shifa Saher S.A. Sheikh	A	A	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A	A	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
20.	Shrutika B. Mutkure	A	P	P	P	P	P	A	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
21.	Suhani G. Bhure	P	P	P	P	P	P	P	P	P	A	P	A	P	P	A	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	
22.	Tanushree A. Mohadikar	P	P	P	P	P	P	P	A	P	A	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	A	P	P	A	P	P	A	P	P	P	P	P	P	P
23.	Vaishnavi A. Lutade	P	P	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
24.	Yashashree S. Bhojwar	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P



Shilpa
Course Co-ordinator

N.C. Wadga
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



Naamlic

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



Attendance for the Month of
Practical

Roll No.	NAME	03/12/24	10/12	17/12	24/12	02/13	09/13	16/13	23/13	30/13	06/14	13/14	20/14
1.	Aastha P. Karnic	A	P	P	A	P	P	P	A	A	P	P	A
2.	Divya W. Deskar	P	P	P	P	P	P	A	P	P	P	P	A
3.	Gajiyar Firdoz J. Sheikh	P	P	P	P	P	P	A	P	P	P	P	P
4.	Harshada S. Adgulkar	A	P	P	P	P	A	P	P	P	P	P	P
5.	Janhavi J. Patil	A	P	P	P	P	P	A	P	P	P	P	A
6.	Janhavi M. Khobragade	P	P	P	P	P	P	A	P	P	P	A	P
7.	Kartiki D. Chavhan	P	P	P	P	P	P	A	P	P	P	A	P
8.	Komal R. Feddewar	P	P	A	P	P	P	P	A	P	P	P	P
9.	Mehroze I. Gureshi	A	P	A	P	A	P	P	P	P	A	P	P
10.	Muskan Alfiya I. Khan	P	P	P	P	A	P	P	A	P	P	A	P
11.	Palak S. Jaiswal	P	P	P	P	P	A	P	P	P	P	P	A
12.	Poonam R. Kopardkar	P	P	P	P	P	P	A	P	P	P	P	A
13.	Rajivi P. Relpade	P	P	P	A	P	P	P	P	P	P	P	A
14.	Sakshi P. Dhenuc	P	P	P	P	P	P	A	P	P	P	P	P
15.	Saniya V. Admane	P	P	A	P	P	P	A	P	P	P	P	P
16.	Sorvadhya S. Mendhekar	P	P	P	P	P	A	P	P	P	A	A	P
17.	Sayali K. Rajurkar	P	P	P	P	P	P	P	A	P	P	P	P
18.	Sayali K. Gulhane	P	P	P	P	P	P	A	P	P	A	P	P
19.	Shifa Saher S. A. Sheikh	A	P	A	P	P	A	P	P	P	P	P	P
20.	Shrutika B. Mutkure	P	P	P	P	A	P	P	P	A	P	P	P
21.	Suhani G. Bhure	P	P	P	P	P	A	P	P	P	P	P	A
22.	Tanushree A. Mohadika	P	P	P	A	P	P	P	P	A	P	A	P
23.	Vaishnavi A. Lutade	P	P	P	A	P	P	P	P	P	A	P	P
24.	Yashashree S. Bhoyar	P	P	P	P	A	P	P	P	P	A	P	P

Write

Nalwadi

Off. Principal
Sevadai Mahila Mahavidyalaya
Nagpur.



Nalwadi

Off. Principal
Sevadai Mahila Mahavidyalaya
Nagpur.

Sevadal Mahila Mahavidyalaya, Nagpur
Department of Microbiology

Certificate Course in "Clinical Microbiology"
Academic session 2023-24

Theory Examination Summer 2024

Time: Three Hours

Maximum Marks: 50

N. B.:- (1) All questions are compulsory and carry equal marks
(2) Illustrate your answers with suitable diagram

- Q. 1.** Explain the methods of isolation and identification of *Salmonella*, *Klebsiella*, and *Proteus* (10)
- OR**
- Describe the pathogenicity of *Mycobacterium tuberculosis* and *E.coli*. (10)
- Q.2.** Describe characteristic features of pox virus and Herpes virus. (10)
- OR**
- Discuss the classification and identification of medically important fungi (10)
- Q. 3.** Describe the etiology, pathogenesis & diagnosis of *Entamoeba histolytica* (10)
- OR**
- Describe the etiology, pathogenesis & diagnosis of *Ascaris*. (10)
- Q.4.** a) Describe microbial examination of urine. (05)
b) Write a note on composition and microbial analysis of semen. (05)
- OR**
- c) Describe microbial examination of stool (05)
d) What is the importance of CSF analysis? How is it carried out? (05)
- Q. 5. Write short notes on:**
- a) Classification of Pathogenic bacteria (outline). (2½)
b) Classification of infectious fungi. (2½)
c) Leishmaniasis. (2½)
d) Composition of CSF (2½)



Naublr

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Sevadal Mahila Mahavidyalaya
Nagpur.

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Sevadal Mahila Mahavidyalaya

Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

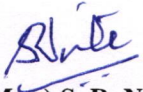
Department of Microbiology Certificate Course in "Clinical Microbiology" Academic Session 2023-24

Performance of Students Enrolled in the Certificate Course

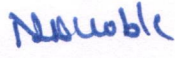
Sr. No.	Name of the student	Theory Marks out of 50	Practical Marks out of 30	Internal Assessment Marks out of 20 (Seminar Exam)
1	Aastha Pramod Karme	36	25	17
2	Divya Naresh Deokar	40	25	18
3	Gajiya Firdoj Jakir Sheikh	40	27	18
4	Harshada Shrikant Adgulkar	36	25	17
5	Janhavi Janardhan Paunikar	37	26	18
6	Janhavi Manojrao Khobragade	38	26	18
7	Kartiki Dhiraj Chavhan	40	26	18
8	Komal Raju Feddewar	41	25	16
9	Mehroze Ismail Qureshi	38	26	18
10	Muskan Alfiya Iqbal Khan	40	25	17
11	Palak Sandeep Jaiswal	41	25	17
12	Poonam Revnath Koparkar	40	25	17
13	Ragini Prabhakar Rehpade	40	26	17
14	Sakshi Prakash Dhomne	39	25	17
15	Saniya Virendra Admane	39	26	17
16	Sarvadhnya Satish Mendhekar	40	25	17
17	Sayali Kamlakar Rajurkar	43	28	19
18	Sayali Rajendra Gulhane	40	28	19
19	Shifa Saher S. Ahmed Sheikh	42	28	19
20	Shrutika Banduji Mutkure	40	28	19
21	Suhani Girishchandra Bhure	40	28	19
22	Tanushree Akash Mohadikar	42	28	19
23	Vaishnavi Ajay Lutade	44	27	19
24	Yashashree Sheshrao Bhojar	40	28	19

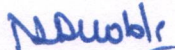
Result Analysis:

Pass percentage of the students who successfully completed the certificate course = 100%
Certificates were provided to all the successful students.


Dr. (Mrs.) S. R. Nimbarte
Course Coordinator




Prof. (Mrs.) N.S. Dhoble
Off. Principal
Sevadal Mahila Mahavidyalaya,
Nagpur



Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Sample Copy of the Certificate issued to the successful students of the Certificate Course in 'Clinical Microbiology'.



S. R. Nimbarde



N. S. Dhole

Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

NAAC ACCREDITED 'A'

SEVADAL MAHILA MAHAVIDYALAYA

Sakkardara Chowk, Umrer Road, Nagpur.

Certificate Course on Microbiological Quality Control and Testing of Food and Water



Dr. Prabhakar R. Bhandari
Course Co-ordinator

UG and PG Department of Microbiology
Academic Session 2023-24

Nagpur



Microbiological Quality Control and Testing of Food and Water

Description and Preamble of the course:

- This module is designed to give learners a clear understanding of the role of microbiological quality assurance and quality control, particularly as applied to the (bio) pharmaceutical, Food, Water Industries and medical device sectors.
- It will provide learners with the information and laboratory skills to enable them to recognise the role of the microbiologist in the production of safe and wholesome products and to participate effectively in Quality Assurance teams in industry.
- It will equip learners with the skills necessary to design appropriate QC testing protocols for raw materials, waters, in-process and finished products.
- Learners should be able to adopt an advisory role in situations relating to Microbiological Quality Control by recommending suitable materials, equipment and procedures. 'Laboratory practicals will be delivered/rolled out to students with a lecturer led emphasis on sustainability.
- Students will be asked to reflect on how they may incorporate sustainability into their practical work when preparing their laboratory reports'.
- Learners will have gained sufficient knowledge of the microbiology of pharmaceutical and healthcare products to enable them to take up responsible positions in QA and QC in Industry.

Syllabus on Certificate course on Microbiological Quality Control and Testing of Food and Water

PART-A

General Requirements for Microbiological Laboratories (10 Hrs- T-5+ P-5)

SN	Particulars
1	Equipment
2	Glassware/Plastic ware
3	Media/Reagents and Reference cultures
4	Quality Assurance: Assuring Quality of Test Results in Microbiology Laboratory
5	Good Microbiology Laboratory Practices including Biosafety and Biohazard Management

Nagpur



Part-B
Methods of Analysis for food Quality (20 Hrs- T-10+ P-10)

S. No.	METHOD NO.	METHOD
1	FSSAI15.001:2023	Method for Enumeration of Aerobic Plate Count (APC)
2	FSSAI15.002:2023	Method for Enumeration of <i>Bacillus cereus</i>
3	FSSAI15.004:2023	Method for Enumeration of Coliforms
4	FSSAI15.005:2023	Method for Commercial Sterility Test for Sterilized/UHT Milk /Flavored Evaporated Milk
5	FSSAI15.006:2023	Method for Commercial Sterility Test for Sterilized/UHT Cream
6	FSSAI15.008:2023	Method for Enumeration of Sulfite Reducing Clostridia based on ISO :15213
7	FSSAI15.009:2023	Methods for Isolation and Identification of <i>Clostridium Perfringens</i> and <i>Clostridium Botulinum</i> and Enumeration of <i>Clostridium Perfringens</i> based on IS5887-Part4
8	FSSAI15.010:2023	Method for Enumeration of <i>Enterobacteriaceae</i>
9	FSSAI15.011:2023	Method for Enumeration of <i>Escherichia Coli</i> based on ISO: 16649-2

Part C
Methods of Analysis Water/Test methods for Water Quality (20 Hrs- T-10+ P-10)

S. No.	METHOD NO.	METHOD
1	FSSAI15.024:2023	Method for Enumeration of Aerobic Microbial count/Standard Plate Count
2	FSSAI15.025:2023	Method for Enumeration of <i>Escherichia coli</i> and Coliforms
3	FSSAI15.026:2023	Method for Enumeration of Coliforms (Alternative method)
4	FSSAI15.027:2023	Method for Determination of Enterococci (Faecal Streptococci)
5	FSSAI15.028:2023	Method for Detection of Enterococci (Faecal Streptococci) (Alternative method)
6	FSSAI15.029:2023	Method Detection of <i>Salmonella</i>
7	FSSAI15.032:2023	Method for Detection of Yeast & Mould
8	FSSAI15.038:2023	Method for Detection of MS2 Phage in Water by Enrichment Spot Assay Technique
9	FSSAI15.023:2023	Method for Enumeration of Yeast and Mould

Scheme of Course:

- The course will be taught through both teaching of theory and Practical classes
- Theory: 25 Hour
- Practical: 25 Hour
- Guest Lecture/ Seminar/ Workshop/ Field Visits: 10 Hour
- Exam pattern: Offline: Theory -03 Hours and Practical Examination- 06 Hour
- Attendance: 75 % of attendance is compulsory



Requirements of Staff and Budget:

Full Time Teaching Staff	Non Teaching Staff	Budget
02	01	Rs. 5, 00,000/- Approximate for Laboratory Equipments, Consumables and Staff Salary.

Course and Learning Outcome: After completion of the unit, Student is able to

- Quality Control Microbiology Certificate - This certificate in quality control microbiology and biology is designed to prepare students for careers in fields such as Microbiology, medical devices, pharmaceuticals, biological, food safety, Water safety bio manufacturing, and testing laboratories.
- Quality control (testing finished products) and quality assurance (checking quality during production) both serve essential roles in industrial Microbiology and pharmaceutical manufacturing.
- This certificate would prepare the student for a job as a quality control or quality assurance technician, responsible for setting up periodic testing and analysis during both the research and development and the manufacturing processes of biomolecules, pharmaceuticals, or medical devices.
- This certificate emphasizes testing for microbiological contamination or biological formulation of a product.
- Describe potential microbial contamination problems which would compromise the wholesomeness and safety of Pharmaceutical and Healthcare products.
- Define the role of the microbiologist in the implementation of appropriate Quality Assurance (QA) and Quality Control (QC) programmes.
- Identify potential sources of microbial contamination in industry.
- Assess specific microbiological problems associated with 'water for pharmaceutical purposes' and monitor such water.
- Construct appropriate microbiological QC testing protocols for raw materials, waters, in-process and finished products.
- Plan and undertake pharmacopoeial 'microbial limits tests'.
- Perform total cell counts and viable counts, using a broad range of analytical techniques.


Reference Books:

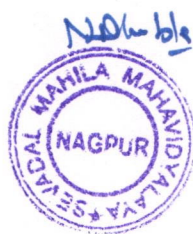
1. Keith Wilson & John Walker – 1994. Practical Biochemistry, Principles & Techniques.
2. Principles of applied biomedical instrumentations- A. Geddes & LE Baken John Wiley & Sons.
3. Instrumental methods of analysis – Den Willard & Merit- Asian edition.
4. Manual of Diagnostic Microbiology- Dr. B.J. Wadhai & Dr. G. L. Bhoosreddy - 1st Edition Himalaya Publishing House.
5. Basic experimental Microbiology by Ronal M. Atlas, Alfred E. Brown, Kenneth W. Dobra, Wonas Miller (1986) Pren- Tice Hall.
6. Biologies guide to principles, techniques of practical Biochemistry by K. Wilson and K.H.
7. Goulding Edward Arnold Publications.



ABBREVIATIONS

Sr.No.	Abbreviation	Expanded Form
1	%	Percentage
2	μm	Micrometer
3	$^{\circ}\text{C}$	Degree Celsius
4	Hr	Hour
5	L	Liter
6	min	Minutes
7	mL	Milliliter
8	mm	millimeter
9	μL	Micro liter
10	IS	Indian Standard
11	ppb	Parts per billion
12	ppm	Parts per million
13	ISO	International Organization for Standardization
14	gm	Gram
15	mg	Milligram
16	Cfu	Colony forming unit
17	sp.	species
18	μg	Microgram
19	UV	Ultra Violet


Course Coordinator
(Dr. P. R. Bhandari)



N.S. Dhoble
Principal
(Prof. (Mrs.) N. S. Dhoble)
Off. Principal
Sevadai Mahila Mahavidyalaya
Nagpur.

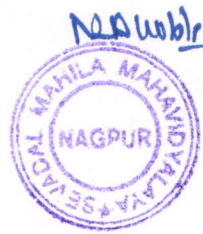
N.S. Dhoble

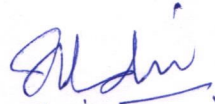
Sevadal Mahila Mahavidyalaya and Research Academy, Nagpur.
Post Graduate Department of Microbiology

Certificate Course in
"Microbiological Quality control and Testing of Food and Water"

Academic session 2023-24
List of Students Enrolled in the Course

Sr. No.	Name of the Students	Signature
1	Abhishree Hemant Deulkar	
2	Anuradha Nivruti Choudhary	
3	Dipti Vilas Sawarkar	
4	Harshada Atul Mahlankar	
5	Isha Nilkanth Nakshane	
6	Krutika Jagdish Gajbhiye	
7	Madhuri Pramod Deshmukh	
8	Prachi Balkrushna Shende	
9	Priya Damodar Wankhede	
10	Rutuja Khushal Vaidya	
11	Saba Afreen Md Sharif	
12	Sakshi Ganesh Chavan	
13	Sakshi Kailash Meshram	
14	Shreya Sanjay Zarbade	
15	Suvidha Girdhar Hedau	
16	Vaishnavi Gulab Mundare	
17	Yogeshwari G. Dhawale	




Dr. P. R. Bhandari
Course Co-ordinator



Sevalal Shikshan Sanstha's
NAAC RE-ACCREDITED WITH 'A' GRADE
Sevalal Mahila Mahavidyalaya
Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Certificate of Completion

This certificate is awarded to

Ms. Dipti V. Sawarkar

she has successfully completed the Certificate Course in
"Microbial Quality Control & Testing",
conducted by the Department of Microbiology.

Date : 30/04/2024

Dr. Prabhakar R. Bhandari

Dr. Prabhakar R. Bhandari
Course Coordinator



N. Dhoble

Prof. (Mrs.) Nirupama S. Dhoble
Off. Principal
Sevalal Mahila Mahavidyalaya, Nagpur

Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

SEVADAL MAHILA MAHAVIDYALAYA

Sakkardara Chowk, Umrer Road, Nagpur-440024

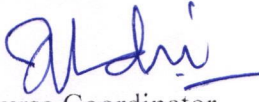
Date: 08/01/2024

NOTICE


All the members of All the members of the UG and PG Department of Microbiology are hereby informed that Hon'ble principal has called the meeting regarding the to start the Certificate Course in **Microbiological Quality Control and Testing of Food and Water**, and to discuss & decide its working strategy for the session 2023-24 on 10th January 2024 at 01:00 pm at Hon'ble Principal's office.

Agenda of the meeting:

- 1) To start Certificate course in Microbiological Quality Control and Testing of Food and Water.
- 2) To discuss regarding working of the course, date of commencement and framing the syllabus.
- 3) Any other matter with the permission of the Chair.



Course Coordinator
(Dr. P. R. Bhandari)





Principal
(Prof. P.N. Charde)
Principal
Sevalal Mahila Mahavidyalaya
Umrer Road, Nagpur-9.

Copy to:

Dr. A.P. Lambat- NAAC Coordinator 

Dr. (Mrs.) S. R. Nimbarte 

Dr. (Mrs.) K. V. Dubey 

Ms. M. J. Thakkar

Ms. C. A. Sukheja



SEVADALMAHILAMAHAVIDYALAYA
Sakkardara Chowk, Umrer Road, Nagpur-440024

Date: 10/01/2024

Minutes of Meeting on Certificate Course: 2023-24

The meeting for the to start the Certificate Course in Microbiological Quality Control and Testing of Food and Water for the academic session 2023-24 was held on 10th January 2023 at 1:00 PM in the Hon`ble Principal`s chamber.

The following member were present,

1) Dr. P. N. Charde	Principal	Chairperson
2) Dr. A.P. Lambat	NAAC Coordinator	
3) Dr. P.R. Bhandari	HOD	Co-ordinator
4) Dr. (Mrs.) S. R. Nimbarte	Lecturer	Member
4) Dr. (Mrs.) K. V. Dubey	Lecturer	Member
5) Ms. M. J. Thakkar	CHB Lecturer	Member
6) Ms. C. A. Sukheja	CHB Lecturer	Member

The Co-ordinator welcomed all the members and Hon`ble principal called the Meeting "In Order". With the permission of the principal and the agenda is discussed as below

Agenda of the meeting:

- 1) To start Certificate course in Microbiological Quality Control and Testing of Food and Water.
- 2) To discuss regarding working of the course, Duration of the course, date of commencement and framing the syllabus.
- 3) Any other matter with the permission of the Chair.

Item No. 1: To start Certificate course in PG Department of Microbiology.

It was decided that to start new Certificate Course in the P G Dept. of Microbiology (M. Sc) in Microbiological Quality Control and Testing of Food and Water for the academic session 2023-24 for the second year Post Graduate students of Microbiology and also for UG B. Sc. Final Year.

Item No.2: To discuss regarding working of the course, date of commencement and framing the syllabus.

It was decided that Certificate Course in Microbiological Quality Control and Testing of Food



Responsible

and Water in the UG and PG Department of Microbiology from February 2024 in the session 2023-24 and the Syllabus of the course will be designed by all the members and set all the theory and practical as per the BIS Rules and regulation. It was also decided that the whole course will be of 50 Hours Duration to complete the syllabus Theory and Practicals.



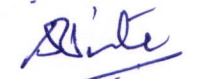
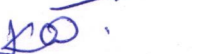
Agenda-3: Any other matter with the permission of chair.

Since there was no matter to discuss and decide hence the meeting was ended with vote of thanks to the chair.

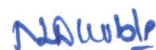
Name

1. Dr. P. N. Charde
2. Dr. A.P. Lambat
3. Dr. P. R. Bhandari
4. Dr. (Mrs.) S. R. Nimbarte
5. Dr. (Mrs.) K. V. Dubey
6. Ms. M. J. Thakkar
7. Ms. C. A. Sukheja


Signature
Principal
Sevada Mahila Mahavidyalaya
Nagpur





SEVADALMAHILAMAHAVIDYALAYA

Sakkardara Chowk, Umrer Road, Nagpur-440024

Date: 02/04/2024

NOTICE

All the members of all the members of the UG and PG Department of Microbiology are hereby informed that Hon'ble principal has called the meeting to regarding Certificate Course in **Microbiological Quality Control and Testing of Food and Water**, to discuss & on examination pattern and certification of the course on 3rd April 2024 at 01:00 pm at Hon'ble Principal's office.


Agenda of the meeting:

- 1) To confirm the minutes of last meeting.
- 2) To discuss about the Exam Pattern and certification of Certificate Course
- 3) Any other matter with the permission of the Chair.



Course Coordinator

(Dr. P. R. Bhandari)



Principal

(Prof. (Mrs.) N. S. Dhoble)

Off. Principal

Sevadal Mahila Mahavidyalaya
Nagpur.

Copy to:

Dr. A.P. Lambat- NAAC Coordinator 

Dr. (Mrs.) S. R. Nimbarte 

Dr. (Mrs.) K. V. Dubey 

Ms. M. J. Thakkar

Ms. C. A. Sukheja



SEVADALMAHILAMAHAVIDYALAYA

Sakkardara Chowk, Umrer Road, Nagpur-440024

Minutes of Meeting on Certificate Course: 2023-24

The meeting for the to start the Certificate Course in Microbiological Quality Control and Testing of Food and Water for the academic session 2023-24 was held on 3rd April 2024 at 1:00 PM in the Hon'ble Principal's chamber.

The following member were present,

1) Prof. (Mrs.) N. S. Dhoble	Principal	Chairperson
2) Dr. A.P. Lambat	NAAC Coordinator	
3) Dr. P.R. Bhandari	HOD	Co-ordinator
4) Dr. (Mrs.) S. R. Nimbarte	Lecturer	Member
4) Dr. (Mrs.) K. V. Dubey	Lecturer	Member
5) Ms. M. J. Thakkar	CHB Lecturer	Member
6) Ms. C. A. Sukheja	CHB Lecturer	Member

The Co-ordinator welcomed all the members and Hon'ble principal called the Meeting "In Order". With the permission of the principal and the agenda is discussed as below

Item No. 1: To confirm the minutes of last meeting.







The minutes of the last meeting held on 10/01/2024 were read and confirmed unanimously by all the members.

Item No.2: To discuss about the Exam Pattern and certification of Certificate Course.

It was decided that the after completion of the course syllabus in 60 Hours duration, students have to give the theory and practical exam separately and submit the assignment. On completion of the examination declare the result ad distribute the certificates to the successful students.

Agenda-3: Any other matter with the permission of chair.

Since there was no matter to discuss and decide hence the meeting was ended with vote of thanks to the chair.

Name	Signature
1. Prof. (Mrs.) N. S. Dhoble	
2. Dr. A.P. Lambat	
3. Dr. P. R. Bhandari	
4. Dr. (Mrs.) S. R. Nimbarte	
5. Dr. (Mrs.) K. V. Dubey	
6. Ms. M. J. Thakkar	
7. Ms. C. A. Sukheja	





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Sevalal Mahila Mahavidyalaya

Place for Higher Learning & Research

(Research Academy)

Sakkardara Sqaure, Umrer Road, Nagpur-440 024

Email: sevamahilamv@gmail.com

Website: www.sevalalmahilamahavidyalay.ac.in

Certificate Course in Water Quality Monitoring & Management

Department of Environment Science



Noble

**Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.**

Course title: Water quality monitoring methods and analysis.

Course coordinator(s): Dr. Pravin U. Meshram

Course instructor(s): Dr. Pravin U. Meshram

Contact details: 9890432005/ pravin2668@rediffmail.com

Course type: Certificate Course

Course offered in: Semester VI

Course Duration: 3 Months

Course description: 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.

Course objectives:

1. To enable students to understand the principles and the practical approaches and techniques required to effectively monitor the chemical, hydrological and microbiological elements of water quality.
2. To build understanding of water quality parameters and their relation to public health and environment.

Course content:

- 1 **Introduction-** sampling techniques, basic concept of quantitative techniques, instrument methods of analysis, standard solutions, water quality standards for different applications
- 2 **Acidity and Alkalinity:** Sources and nature, environmental significance, methods of measurement, Application of data
- 3 **Hardness:** General considerations; causes and source, environmental significance, methods of determination, application of data in environmental science
- 4 **Chlorides:** General considerations; causes and source, environmental significance, methods of determination, application of data in environmental science
- 5 **Dissolved oxygen:** General considerations, environmental significance of dissolved oxygen, collection of samples for determination of dissolved oxygen, methods of Determination
- 6 **BOD:** General consideration, nature of BOD reaction, method of measurement, application of data
- 7 **COD:** General consideration, methods of measurement, application of data in environmental science
- 8 **Sulphates, Nitrates and Phosphates:** General considerations; causes and source, environmental significance, methods of determination, application of data in environmental science



Handwritten signature in blue ink.

Off. Principal
Sevadai Mahila Mahavidyalaya
Nagpur.

Evaluation criteria:

- Major Practical exam
- Viva
- Field Report
- Practical Record

Learning outcomes:

1. Understand meaning of important parameters for measuring water quality;
2. Water quality criteria and standards, and their relation to public health, environment and urban water cycle;
3. Learn how to run accurate water quality tests and to determine how the parameters relate to each other;
4. Plan water quality surveillance for a given aquatic environment and to understand what a test result means in terms of the health of the ecosystem.

Teaching approach:

Classroom teaching, field work and laboratory work.

References Books:

1. Standard methods for the examination of water and wastewater published by APHA 15th ed.
2. Keith, L.H. [Ed.] 1988 Principles of Environmental Sampling. American Chemical Society

Student responsibilities:

- The course has Environmental Science laboratory experiments, and field visits.
- Opportunity to repeat laboratory experiments will be very limited and hence regular attendance is important.

Course reviewers:

1. Dr. P. R. Chaudhary
2. Dr. P. B. Deshbhratar
3. Dr. Shardha Dhadase



N. S. W. D. S.
Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

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Sevadal Mahila Mahavidyalaya

Place for Higher Learning & Research (Research Academy)

Sakkardara Sqaure, Umrer Road, Nagpur-440 024

Date-01/11/2023

Notice

All the students are hereby informed that the Certificate Course in Water Quality Monitoring & Management run by Department of Environmental Science is designed to enhance on the art of water monitoring and quantitative analysis of critical water quality parameters, and also management & pollution control. Interested students should contact following teachers for admission before 30 November, 2023.

1. **Dr. P. U. Meshram**, Professor & Head, Department of Environmental Science

Principal



Noble

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Minutes of the Meeting dated 30/04/2024

Certificate Course in “Water Quality Monitoring & Management”

The meeting regarding the Certificate Course in “Water Quality Monitoring & Management” was held on 30th April 2024 at 11.30 am in the Hon'ble Principal's Chamber. Hon'ble Principal Sir presided over the meeting.

Agenda of the meeting:

- 1) To confirm the minutes of the last meeting.
- 2) To review the progress of framing the syllabus of ‘ Aquarium Fabrication and Maintenance’
- 3) Any other matter with the permission of the Chair.

Following Members were present.

- | | |
|--------------------------------------|--------------------|
| 1) Dr. (Mrs.) N.S. Dhoble, Principal | Chairman |
| 2) Dr. Ashish Lambat | IQAC Coordinator |
| 3) Dr. Pravin U. Meshram | Course Coordinator |
| 4) Dr. (Mrs.) Bharati S. Tapase | Member |

Pravin U. Meshram
B. Tapase

Dr. Pravin U. Meshram, Course Coordinator acted as secretary in the meeting. The Coordinator welcomed the Chairperson, Hon'ble Principal and called the meeting in order with the permission of chairperson. The Coordinator read out the agenda of the meeting and subsequently discussed the matter.

- 4) **Item No.1:** To confirm the minutes of the last meeting.

Resolution: The minutes of the last meeting held on 30.04.2024 were read by Course Coordinator and subsequently the minutes were unanimously approved.

- 2) **Item No.2:** To review the progress of framing the syllabus of To review the progress of framing the syllabus of “Water Quality Monitoring & Management”

Resolution: Course Coordinator tabled the newly framed the syllabus of certificate course in To review the progress of framing the syllabus of “Water Quality Monitoring & Management”, in the meeting. After thorough discussion it was approved unanimously.


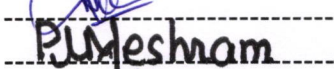
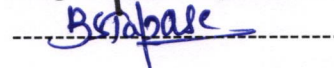



N. Dhoble
Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

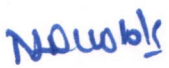
3) **Item No. 3** Any other matter with the permission of Chair.

Resolution: Hon'ble Principal directed the Coordinator to start admissions for the students after Diwali vacation.

As there was no other matter to discuss, the meeting was concluded with vote of thanks by the Cordinator of the course.

Name	Signature
1) Dr. (Mrs.) N.S. Dhoble	
2) Dr. Ashish Lambat	
3) Dr. Pravin U. Meshram	
4) Dr. (Mrs.) Bharati S. Tapase	




Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Sevadal Mahila Mahavidyalaya, Nagpur
Department of Environmental Science

Certificate Course in
“Water quality monitoring and management”

Academic session 2023-24

List of Students Enrolled in the Certificate Course

Sr. No.	Name of the Students
1	Shikha S. Gupta
2	Riya S. Meshram
3	Sejal R. Lokhande
4	Laxmi D. Deshmukh
5	Nikita N. Dhongede
6	Nandini Kelzarkar
7	Nikita H. Tembhekar
8	Tanushree N. Atkare
9	Krishna D. Gadhawe
10	Sayali S. Warhade
11	Urvashi N. Shende
12	Palak N. Bhagat
13	Srushti V. Songhare
14	Sakshi S. Nanaware

P. U. Meshram

Dr. P. U. Meshram
Course Co-ordinator



N.S. Dhoble

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

N.S. Dhoble

Prof. (Mrs.) N.S. Dhoble
Principal
Sevadal Mahila Mahavidyalaya

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Sevadal Mahila Mahavidyalaya
Place for Higher Learning & Research (Research Academy)
Sakkardara Sqaure, Umrer Road, Nagpur-440 024

Date-05/04/2024

Notice

All the students of Certificate Course in Water Quality Monitoring & Management are hereby informed that the Theory test and Practical Examination will be held on dated 26/04/2023 and 27/04/2023 respectively at 11.00 am in UG Laboratory Department of Environmental Science of college. Students are directed to remain present.

P. U. Meshram

Dr. P. U. Meshram

Course Co-ordinator

N.S. Dhoble

Dr.(Mrs.) N.S. Dhoble

Principal



N.S. Dhoble

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Sevadal Mahila Mahavidyalaya, Nagpur
Department of Environmental Science
Certificate Course in
“Water Quality Monitoring & Management”
Academic session 2023-24

Full Marks: 40

Time:120 Min.

Practical

Q.1. To Determine the chloride ions in given sample. **(10 M)**

Q.2. Estimation of hardness of water & waste water sample by complexometric method.

(10 M)

Theory

Question: (Solve any 5)

(1 X 4M=20M)

1. What are the main objectives of water sampling?
2. Discuss the different source of water pollution affecting the water quality.
3. Discuss the physical parameter for the assessment of water analysis.
4. Define the Classification of water bodies *w.r.t.* specific parameter such as chlorides and the hardness.
5. What is dissolve oxygen? How it is measure in water sample and add a note on its significance.
6. What is difference between TDS and TSS? How are they measured?
7. How do you select lake water sampling locations?
8. What are the different type of the water sample?
9. Name the equipment which are used for the collection of the water sample.
10. What are the Conventional method of water treatment plant, explain them.

P. U. Meshram

Dr. P. U. Meshram
Course Co-ordinator



N. Hobli
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Sevadal Mahila Mahavidyalaya, Nagpur

Department of Environmental Science

Name of the Centre : **Sevadal Mahila Mahavidyalaya, Nagpur**Name of the Examination : **Certificate Course in Water Quality Monitoring & Management**Subject : **Environmental Science**

Max. Marks : 100

No. of Students Present : 14

No. of Students Absent : 00

Total No. of Admitted students: 14

Sr. No.	Name of student	Signature of students	Total Marks Obtained	
			Figure	Words
1.	Shikha S. Gupta	<i>Shikha Gupta</i>	85	Eighty Five
2.	Riya S. Meshram	<i>R Meshram.</i>	80	Eighty only
3.	Sejal R. Lokhande	<i>sejallokhande</i>	80	Eighty only
4.	Laxmi D. Deshmukh	<i>Laxmi D. Deshmukh</i>	85	Eighty Five
5.	Nandini Kelzarkar	<i>Nandini Kelzarkar</i>	81	Eighty One
6.	Nikita H. Tembhekar	<i>N Tembhekar</i>	83	Eighty Three
7.	Tanushree N. Atkare	<i>Tanushree N. Atkare</i>	86	Eighty Six
8.	Krishna D. Gadhawe	<i>Krishna D. Gadhawe</i>	83	Eighty Three
9.	Sayali S. Warhade	<i>Sayali S. Warhade</i>	82	Eighty Two
10.	Urvashi N. Shende	<i>Urvashi N. Shende</i>	80	Eighty only
11.	Palak N. Bhagat	<i>Palak N. Bhagat</i>	77	Seventy Seven
12.	Sakshi S. Nanaware	<i>S.S. Nanaware</i>	84	Eighty Four
13.	Sanika J. Kadu	<i>Sanika J. Kadu</i>	78	Seventy Eight
14.	Kalyani Khedkar	<i>Kalyani Khedkar</i>	85	Eighty Five

Date : **30/4/24***Ashtabac*

External

P. K. Deshmukh

Internal

Signature :

*Nanaware*

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Sevadal Mahila Mahavidyalaya, Nagpur
Place for Higher Learning and Research
Sakkardhara Sqaure, Umrer Road, Nagpur-440024

Department of Environmental Science
Certificate Course in Water Quality Monitoring & Management
Academic Session 2023-24

MARK SHEET

Sr. No.	Name of the Students	Marks Obtained			In Words	Grade
		Theory + Practical	Internal Assessment	Total		
1	Shikha S. Gupta	35	50	85	Eighty Five	A
2	Riya S. Meshram	31	49	80	Eighty only	A
3	Sejal R. Lokhande	34	46	80	Eighty only	A
4	Laxmi D. Deshmukh	33	52	85	Eighty Five	A
5	Nandini Kelzarkar	30	51	81	Eighty One	A
6	Nikita H. Tembhekar	35	48	83	Eighty Three	A
7	Tanushree N. Atkare	36	50	86	Eighty Six	A
8	Krishna D. Gadhave	35	48	83	Eighty Three	A
9	Sayali S. Warhade	33	49	82	Eighty Two	A
10	Urvashi N. Shende	30	50	80	Eighty only	A
11	Palak N. Bhagat	30	47	77	Seventy Seven	A
12	Sakshi S. Nanaware	35	49	84	Eighty Four	A
13	Sanika J. Kadu	30	48	78	Seventy Eight	A
14	Kalyani Khedkar	34	51	85	Eighty Five	A

Rudeshman.

Dr. P. U. Meshram
Course Co-ordinator



Nauoble

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Nauoble

Dr. (Mrs.) N. S. Dhoble
Off. Principal

Minutes of the Meeting dated 16.10.2023




Certificate Course in “Water Quality Monitoring & Management”

The meeting regarding the Certificate Course in “Water Quality Monitoring & Management” was held on 16.10.2023 at 11.30 am in the Hon'ble Principal's Chamber. Hon'ble Principal Sir presided over the meeting.

Agenda of the meeting:

- 1) To commence the Certificate Course in “Water Quality Monitoring & Management”
- 2) To frame the syllabus of the course.
- 3) Any other matter with the permission of the Chair.

Following Members were present.

- | | | |
|-----------------------------------|--------------------|---|
| 1) Prof. Pravin Charde, Principal | Chairman |  |
| 2) Dr. Ashish Lambat | IQAC Coordinator | |
| 3) Dr. Pravin U. Meshram | Course Coordinator |  |
| 4) Dr. (Mrs.) Bharati S. Tapase | Member |  |

Dr. Pravin U. Meshram, Course Coordinator acted as secretary in the meeting. The Coordinator welcomed the Chairperson, Hon'ble Principal and called the meeting in order with the permission of chairperson. The Coordinator read out the agenda of the meeting and subsequently discussed the matter.

4) **Item No.1:** To commence the Certificate Course in “Water Quality Monitoring & Management”.

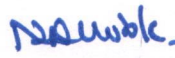
Resolution: Unanimously it was decided to commence the Certificate Course in “Water Quality Monitoring & Management”, from the session 2023-24.

2) **Item No.2:** To frame the syllabus of the course.


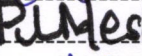

Resolution: Hon'ble Principal expressed his views regarding the framing of course syllabus, Dr. Pravin U. Meshram was asked to prepare syllabus of the Certificate Course in “Water Quality Monitoring & Management”.

3) **Item No. 3** Any other matter with the permission of Chair.




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Resolution: As there was no other matter to discuss, the Coordinator ended the meeting by vote of thanks.

- | Name | Signature |
|---------------------------------|---|
| 1) Hon'ble Prof. Pravin Charde |  |
| 2) Dr. Ashish Lambat |  |
| 3) Dr. Pravin U. Meshram | P. U. Meshram |
| 4) Dr. (Mrs.) Bharati S. Tapase |  |



20/11/16



Sevalal Shikshan Sanstha's
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Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Certificate of Completion

This certificate is awarded to

Ms. Shikha S. Gupta

she has successfully completed the Certificate Course in
"Water Quality Monitoring and Management"
conducted by the Department of Environmental Science.

Date : 30/04/2024

Dr. Pravin Meshram

Dr. Pravin Meshram
Course Coordinator

Nirupama S. Dhole

Prof. (Mrs.) Nirupama S. Dhole
Off. Principal
Sevalal Mahila Mahavidyalaya, Nagpur



Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

Nirupama S. Dhole



Seval Education Society's

Seval Mahila Mahavidyalaya

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Place of Higher Learning & Research (Research Academy)

Sakkardara Square, Umrer Road, Nagpur- 440024

E Mail : sevamahilamv@gmail.com; smm-college@yahoo.com

Website : www.sevalmahilamahavidyalaya.ac.in

Certificate Course In Environmental Sampling, Analysis and Monitoring

(Duration : Three Months)

Course Co-ordinator

Mrs. A.A. Chinchmalatpure

Dept. of Environmental Science

Seval Mahila Mahavidyalaya

Nagpur

Session : 2023-2024



Nawble

Off. Principal

Seval Mahila Mahavidyalaya
Nagpur.

Course Rationale

This Certificate program provides students with a solid understanding of the theoretical and practical components of the baseline and construction phases of Environmental Monitoring. On the job, Environmental Monitors identify the associated impacts of industrial activities on the environment by Observing, Recording, Communicating and Archiving (ORCA) this information to stakeholders in order to minimize or mitigate negative environmental impacts. Students will be prepared to play a key role in ensuring industry activities comply with environmental laws and regulations.

The Environmental Monitoring Certificate introduces students to natural resources, the role of the environmental monitor, and legislation and permitting. This course will introduce students to the relationship between natural resource industries and Environmental monitors.

Outcome of the Course

Students will learn and practice skills that support pursuit of continued education in environmental science, and careers requiring knowledge of environmental site investigation procedures. General critical thinking, empirical and quantitative reasoning, interpersonal, and applicable technological skills that can be applied to any future career choice or pursuit will also be developed in this class.

Instructional Methodology: This course includes both classroom and field activities. Classroom activities will include lecture, in-class, and laboratory exercises. Outdoor activities will include exercises at the NRG Campus and field trips to off-campus locations.

Students Learning Outcome

Upon Successful completion of course classroom, lab, field, assignment and exam requirements, students will

- Understand the objectives of site environmental assessments involving the characterization of site soil, ground and surface water, and terrestrial conditions
- Describe the scientific method and the value of its use in assessing site environmental conditions
- Be aware of applicable regulatory agency guidance related to site environmental assessments
- Study the process of developing comprehensive, statistically valid, and feasible site sampling plans
- Practice methods of laboratory and field data collection, including the operation of standard sampling equipment and instruments
- Practice standard procedures for collection and preservation of site samples, data recording and analysis, and reporting
- Prepare a site assessment report that addresses investigation objectives, and documents investigation results in accordance with regulatory agency data collection, analysis, and reporting requirements



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Nagpur.

Course Content

Unit I Introduction of Environmental Monitoring

- Define Environmental Monitoring
- Identify the roles the Environmental Monitor (EM)
- Objectives of Monitoring,
- Source of Monitoring,
- Objectives of Environmental Sampling,
- Necessity of Environmental (air,water,soil) Sampling,
- Significance of Environmental Sampling.
- Appreciate the benefits of increased environmental awareness
- Summarize the priorities of Environmental Monitors

Unit II Air Monitoring and Analysis

- Basic concept of Air Sampling
- Major air pollutant NO_x, SO_x, CO, CO₂
- Particulate Matter (10 & 2.5)
- Air Sampling method
- National Ambient Air Quality Samples (NAAQ)
- Objectives and Importance of Noise Sampling.

Unit III Water Sampling and Analysis

- Basic Concept of Water Sampling
- Classification of water quality parameters
- Sampling Equipment
- Types of water sample
- Significance of water quality monitoring
- Drinking Water Standards

Unit IV Soil Sampling and Analysis

- Objectives and concept of soil sampling
- Types of soil
- Sampling site selection criteria
- Collection and handling of soil sample
- Labelling and storage of soil Sample.



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General Education Skills

- Critical Thinking: Gather, analyze, synthesize, evaluate and apply information
- Interpersonal: Interact collaboratively to achieve common goals
- Quantitative and Empirical Reasoning: Apply mathematical, logical and scientific principles and methods
- Technology: Use appropriate technology to retrieve, manage, analyze, and present information.

Course Outline:

01. **Module I :** Importance of environmental Monitoring
02. **Module II:** Exposure to different methods of air monitoring
03. **Module III:** Sampling and Monitoring of Water or waste water.
04. **Module IV:** Collection and Analysis .

Duration: Three months

Total Hrs: 60 Hrs.

- Theoretical/ Hands on training - 40 hrs.
- Practical done - 15 hrs.
- Assignment and Seminars - 5 hrs.

Time : 11.30 am. to 12.30 pm on Thursday, Friday and Saturday Practical's: 3:00pm to 4:30pm on Monday Tuesday

Registration Fees: Rs.100/-



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Nagpur,

Practicals:

1. Water Sampling and Storage techniques.
2. Determination of Suspended Particulate Matter (SPM) and Respirable Suspended Particulate Matter (RSPM) in ambient air by using High Volume Sampler.
3. Soil Sampling Techniques
4. Determination of pH, Conductivity, Turbidity in given water sample.
5. Determination of TDS in water sample.
6. Determination of Dissolved Oxygen (DO) in water sample.
7. Determination of pH and Conductivity of Soil.
8. Determination of Relative Humidity by Psychrometer.
9. Determination of Noise Pollution by Noise Meter.
10. Determination of Wind Direction and Velocity by Anemometer.

Book of Reference:

1. Dara S.S. A Textbook of Environmental Chemistry and Pollution Control S.Chand Publication
2. Sharma B.K., Soil and Noise Pollution (1994), Goel Publishing House, Meerut.
3. Rangawala S.C., Ketaki B Dalal, Water Supply and Sanitary Engineering Charotar Publishing House Pvt. Ltd.
4. Chhatwal ,G.R., Mishra M.C., Satake M, Katayal T, Katyal M, and Nagahiro T, Instrumental method of Chemical Analysis, Anmol Publication Pvt. Ltd. New Delhi.
5. Saxena M.M., Environmental Analysis- (Water, Soil, Air) Agro Botanical Publishers, India
6. Rao M.N., Rao H.V., Air Pollution Tata Mc Graw Hill
7. Bhatia, H.S., A Textbook in Environmental Pollution and Control, Galgotia Publication
8. Dhameja S.K., Environmental Engineering and Management, S.K. Katoria
9. Sharma B.K. Environmental Chemistry Goel Publication House, Meerut.
10. Kolay A.K., Wiley Estern Basic Concept of Soil Science Ltd New Delhi.

Study Tour

Visit to Water Treatment Plant/ Waste Water Treatment Plant

Teaching Methodology:

- Lecture-based and ICT based.
- Practical Method.

Assessment and Evaluation Method:

- Theory Examination
- Practical Examination
- Assignment



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Sevalal Mahila Mahavidyalaya
Nagpur.

Faculty Profile:

- Faculty will be deployed from the well-known institution, who are
- Qualified Professor from the well-known institute
- With excellent teaching skills
- Having a rich experience in the field for over fifteen years

Eligibility Criteria

Bachelor Degree of Science is must.

Capacity of Students:

Minimum 10, Maximum 30

Course Co-ordinators:

- 1 (Mrs.) AA. Chinchmalatpure, Assistant Professor, Department of Environmental Science, Sevadal Mahila Mahavidyalaya, Nagpur.
- 2 (Mrs.) P.V. Barde, Assitant Professor, Department of Environmental Science, Sevadal Mahila Mahavidyalaya, Nagpur.



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Nagpur.



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Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Date: - 20.10.2023

NOTICE

All the members of the Department of Environmental Science are hereby informed that the meeting regarding the Certificate Course in Environmental Science has been scheduled on 23rd October 2023 at 11.30am at the Hon'ble Principal's Chamber.

Hon'ble Principal Sir will chair the meeting in presence of A.P. Lambat, NAAC Coordinator.

Agenda of the meeting:

- 1) To commence three Certificate Courses in Environmental Science Department for UG and PG students.
- 2) To frame the syllabus of the course.
- 3) Any other matter with the permission of the chair.

Copy to:

Dr. A. P. Lambat, NAAC Coordinator

A.P. Lambat

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



S.L. Pal

Dr.S.L. Pal
In-Charge PGTD Env.Sci
Sevadal Mahila Mahavidyalaya,
Nagpur



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Place for Higher Learning and Research (Research Academy)
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Minutes of the Meeting dated on 12.12.2023

Certificate Courses in Department of Environmental Science

The meeting regarding the Certificate Courses run by Department of Environmental Science was held on 12th Dec. 2023 at 11.30 am in the Hon'ble Principal's Chamber. Hon'ble Principal Sir presided over the meeting.

Agenda of the meeting:

- 1) To commence three Certificate Courses in Environmental Science Department for UG and PG students.
- 2) To frame the syllabus of the course.
- 3) Any other matter with the permission of the chair.

Following Members were present.

- | | |
|-----------------------------------|---|
| 1) Prof. Pravin Charde, Principal | Chairman |
| 2) Dr. A. P. Lambat | IQAC Coordinator |
| 3) Prof. P. U. Mehram | Head, Department of Environmental Science |
| 4) Prof. S.L. Pal | In-Charge PGTD Environmental Science |
| 5) Dr. Mrs. B.S. Tapase | Member |
| 6) Mrs.A.A. Chinchmalatpure | Member |
| 7) Mrs. P.V. Barde | Member |

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Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Minutes of the Meeting dated on 23.10.2023

Certificate Courses in Department of Environmental Science

The meeting regarding the Certificate Courses run by Department of Environmental Science was held on 23 October, 2023 at 11.30 am in the Hon'ble Principal's Chamber. Hon'ble Principal Sir presided over the meeting.

Agenda of the meeting:

- 1) To commence three Certificate Courses in Environmental Science Department for UG and PG students.
- 2) To frame the syllabus of the course.
- 3) Any other matter with the permission of the chair.

Following Members were present.

- | | |
|-----------------------------------|---|
| 1) Prof. Pravin Charde, Principal | Chairman |
| 2) Dr. A. P. Lambat | IQAC Coordinator |
| 3) Prof. P. U. Mehram | Head, Department of Environmental Science |
| 4) Prof. S.L. Pal | In-Charge PGTD Environmental Science |
| 5) Dr. Mrs. B.S. Tapase | Member |
| 6) .Mrs.A.A. Chinchmalatpure | Member |
| 7) Mrs. P.V. Barde | Member |



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Off. Principal
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Nagpur.

Item No. 1: To commence three certificate courses in Environmental Science Department.

Resolution: Unanimously it was decided to commence the Certificate Course in Department of Environmental Science from the session 2023-24 with course name and coordinators as follows-

A) "Water Quality Monitoring and Management"

Coordinator: Prof Mr. P.U. Meshram

B) "Sewage Treatment Process".

Coordinator: Associate Prof. Mrs. B.S. Tapase

C) "Environmental Sampling, Analysis and Monitoring"

Coordinator: Mrs. A.A. Chinchmalatpure **Member** Mrs.P.V. Barde



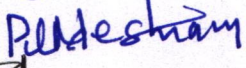
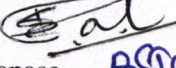
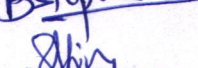
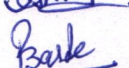

1) **Item No. 2:** To frame the syllabus of the course.

Resolution: Hon'ble Principal expressed his views regarding the framing of course syllabus.

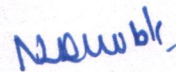
Coordinators and members were asked to prepare syllabus of the respective Certificate Courses.

2) **Item No. 3:** Any other matter with the permission of Chair.

Resolution: As there was no other matter to discuss, the head of department of Environmental Science sum up the meeting by expressing thanks for everyone's gracious attendance

Name	Signature
1) Prof. Pravin Charde, Principal	
2) Dr. A. P. Lambat	
3) Prof. P. U. Mehram	
4) Prof. S.L. Pal	
5) Asso.Prof. Mrs. B.S. Tapase	
6) Mrs.A.A. Chinchmalatpure	
7) Mrs. P.V. Barde	





Off. Principal
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Nagpur.



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Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Date- 18.12.2023

NOTICE

All the PG students of Department of Environmental Science are hereby informed the college has started various certificate courses. One of them is certificate course in "Environmental Sampling ,Analysis and Monitoring" run by Department of Environmental Science.

Interested students should contact following teachers for admission on or before 30th Dec 2023.

1. Mrs.A.A. Chinchmalatpure
2. Mrs. P.V. Barde

Prof. Pravin Charde
Principal
Sevalal Mahila Mahavidyalaya,

Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.



Sevadal Mahila Mahavidyalaya, Nagpur

Place of Higher Learning & Research (Research Academy)

Sakkardara Square, Umrer Road, Nagpur- 440024

Certificate Course in Environmental Sampling, Analysis and Monitoring


Academic Session 2023-24

List of Student

Sr. No.	Name of Students	Class
1.	Aishwarya Nandurkar	M.Sc. Sem III
2.	Dhnyanal Bhoge	M.Sc. Sem III
3.	Himanshi S Bhadang	M.Sc. Sem III
4.	Janhavi S Paraskar	M.Sc. Sem III
5.	Nisha K Ninawe	M.Sc. Sem III
6.	Pranita W Samarth	M.Sc. Sem III
7.	Priya P Gaikwad	M.Sc. Sem III
8.	Rutika C Gorle	M.Sc. Sem III
9.	Sakshi S Aundhekar	M.Sc. Sem III
10.	Shivani D Dhote	M.Sc. Sem III
11.	Shivani K Titarmare	M.Sc. Sem III
12.	Shubhangi R Katre	M.Sc. Sem III
13.	Soumya V Navghare	M.Sc. Sem III
14.	Srushti M Rode	M.Sc. Sem III
15.	Swati R Kaware	M.Sc. Sem III
16.	Nikita Talwekar	M.Sc. Sem I
17.	Pooja Game	M.Sc. Sem I
18.	Pragati Nakade	M.Sc. Sem I
19.	Pranjali Kadam	M.Sc. Sem I
20.	Sakshi Korde	M.Sc. Sem I


Mrs. A.A. Chinchmalatpure
(Course Co-Ordinator)




Dr. Mrs. N.S. Dhoble
Principal
Sevadal Mahila Mahavidyalaya


Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



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Date- 01.04.2024

NOTICE

All the members of the Department of Environmental Science are hereby informed that the meeting regarding the Certificate Course in Environmental Science has been scheduled on 5th April 2024 at 11.30 am at the hon'ble Principal's Chamber.

Hon'ble Principal madam will chair the meeting in presence of A.P. Lambat, NAAC Coordinator.

Agenda of the meeting:

- 1) To confirm the minutes of the last meeting.
- 2) To review the completion of certificate course syllabus and to decide examination schedule of the course.
- 3) Any other matter with the permission of the chair.

Copy to:

Dr. A. P. Lambat, NAAC Coordinator

Dr.S.L. Pal
In-Charge PGTD Env.Sci
Sevalal Mahila Mahavidyalaya,
Nagpur



N. S. Woble

Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.



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Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Minutes of the Meeting dated on 05.04.2024

Certificate Courses in Department of Environmental Science

The meeting regarding the Certificate Courses run by Department of Environmental Science was held on 5th April 2024 at 11.30 am in the Hon'ble Principal's Chamber. Hon'ble Principal madam presided over the meeting.

Agenda of the meeting:

- 1) To confirm the minutes of the last meeting.
- 2) To review the completion of certificate course syllabus and to decide examination schedule the course.
- 3) Any other matter with the permission of the chair.

Following Members were present.

- | | |
|------------------------------|---|
| 1) Prof. N. S.Dhoble | Chairperson |
| 2) Dr. A. P. Lambat | IQAC Coordinator |
| 3) Prof. P. U. Mehram | Head, Department of Environmental Science |
| 4) Prof. S.L. Pal | In-Charge PGTD Environmental Science |
| 5) Dr. Mrs. B.S. Tapase | Member |
| 6) Mrs. A.A. Chinchmalatpure | Member |
| 7) Mrs. P.V. Barde | Member |



N.S.Dhoble
Off. Principal
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Nagpur.

Prof. A.S. Mahakalkar , Head, Department of Chemistry acted as secretary in the meeting. Head of Department welcomed the Chairperson, Hon'ble Principal and other members and called the meeting in order with permission of chairperson, read out agenda of the meeting and subsequently discussed the matter.

1) **Item No. 1:** To confirm the minutes of the last meeting.



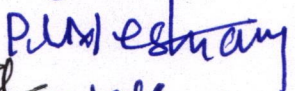
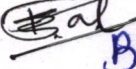
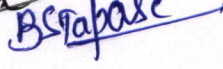

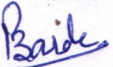
Resolution The minutes of the last meeting held on 12th Dec 2023 were read by the Head of Department of Environmental Science and subsequently the minutes were unanimously approved.

2) **Item No. 2:** To review the completion of certificate course syllabus and to decide examination schedule of the course.

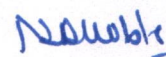
Resolution: Hon'ble Principal madam overviewed the course completion of respective certificate courses run by department of Environmental Science and also guided about the examination pattern and schedule of examination to be commenced in this month.

4) **Item No. 3:** Any other matter with the permission of Chair.

Resolution: As there was no other matter to discuss, the head of department of Environmental Science sum up the meeting by expressing thanks for everyone's gracious attendance.

Name	Signature
2) Prof. N. S.Dhoble	
2) Dr. A. P. Lambat	
3) Prof. P. U. Mehram	
4) Prof. S.L. Pal	
5) Dr. Mrs. B.S. Tapase	
6) Mrs. A.A. Chinchmalatpure	
7) Mrs. P.V. Barde	





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Place for Higher Learning and Research (Research Academy)
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Date- 15.04.2024

NOTICE

All the students enrolled for Certificate Course "**Environmental Sampling, Analysis and Monitoring**" are hereby informed that the timetable of theory and practical examination is as follows-

Date	Exam	Time
23.04.2024	Practical	11.00am- 2.00 pm
26.04. 2024	Theory	11.00am -2.00pm

Take note of the same.

Nawble
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



Shin
Mrs. A.A. Chinchmalatpure
Co-ordinator
Certificate Course
Sevadal Mahila Mahavidyalaya,
Nagpur



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Place of Higher Learning & Research (Research Academy)

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Certificate Course in Environmental Sampling, Analysis and Monitoring

Academic Session 2023-24

Assignment Question

Ques No. 1 Answer the Following in detail. (Any Four) (20m)

- Explain Air Pollution?
- Write in detail Air Sampling methods.
- What are the major Air Pollutants?
- Write in detail Air Quality Parameters.
- Give an account on Sampling Equipment.
- Write about water sampling techniques.
- Discuss Acid Rain and Photochemical SMOG.
- Methods of Soil Sampling.
- Write an informative note on Gas Chromatography and Atomic Absorption Spectrometry.

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Certificate Course in Environmental Sampling, Analysis and Monitoring

Academic Session 2023-24

Practical Exam Question Paper

Ques No. 1 Attempt any two practical.

20M

- Measurement of Noise pollution by Noisemeter in Silent, Commercial and Industrial zone and comparison with standards.
- Determination of Suspended Particulate matter (SPM) and (RSPM) in ambient air by using High Volume Sampler.
- Determination of pH, Conductivity, Turbidity in given Sample

Moubl

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Certificate Course in Environmental Sampling, Analysis and Monitoring Academic Session 2023-24 Marksheet of Student

Sr. No.	Name of Student	Marks Obtained			In Words	Grade
		Theory (60)	Internal Assessment + Practical Exam (40)	Total (100)		
1.	Aishwarya Nandurkar	41	35	76	Seventy -Six	A
2.	Dhnyanal Bhoge	43	30	73	Seventy Three	A
3.	Himanshi S Bhadang	41	34	75	Seventy Five	A
4.	Janhavi S Paraskar	51	34	85	Eighty Five	A+
5.	Nisha K Ninawe	43	36	79	Seventy Nine	A
6.	Pranita W Samarth	43	34	77	Seventy Seven	A
7.	Priya P Gaikwad	52	33	75	Seventy Five	A
8.	Rutika C Gorle	44	35	79	Seventy Nine	A
9.	Sakshi S Aundhekar	44	34	78	Seventy Eight	A
10.	Shivani D Dhote	41	36	77	Seventy Seven	A
11.	Shivani K Titarmare	41	37	78	Seventy Eight	A
12.	Shubhangi R Katre	53	37	90	Ninety	A+
13.	Soumya V Navghare	40	34	74	Seventy Four	A
14.	Srushti M Rode	43	33	76	Seventy Six	A
15.	Swati R Kaware	40	31	71	Seventy One	A
16.	Nikita Talwekar	53	32	85	Eighty Five	A
17.	Pooja Game	54	34	88	Eighty Eight	A+
18.	Pragati Nakade	38	35	73	Seventy Three	A
19.	Pranjali Kadam	42	33	75	Seventy Five	A
20.	Sakshi Korde	55	31	86	Eighty Six	A+

Mrs.A.A. Chinchmalpure
(Course Co-Ordinator)



Dr.Mrs. N.S. Dhoble
Principal
Sevadal Mahila Mahavidyalaya

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Certificates were distributed to the students after successful completion of the certificate course.

Total No. of Students Enrolled = 20

No. of Students Absent = 00

Total No. of Students Appeared = 20



Mrs. A.A. Chinchmalatpure

(Course Coordinator)

Course Co-ordinators:

- 1 Mrs. A.A. Chinchmalatpure, Assistant Professor, P.G. Department of Environmental Science, Sevadal Mahila Mahavidyalaya, Nagpur.
- 2 Mrs. P.V. Barde, Assistant Professor, P.G. Department of Environmental Science, Sevadal Mahila Mahavidyalaya, Nagpur.



Ms. B. C.

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Total Lectures Practical engaged

Roll No.	NAME	2.1.23	4.1.23	6.1.23	9.1.23	10.1.23	12.1.23	15.1.23	16.1.23	19.1.23	23.1.23	24.1.23	30.1.23	1.2.23	6.2.23	8.2.23	11.2.23	14.2.23	17.2.23	22.2.23	28.2.23	29.2.23	31.3.23	1.4.23	6.4.23	10.4.23	14.4.23	16.4.23	20.4.23	23.4.23	28.4.23	31.4.23	Total No. of Lectures Practical attended	
1.	Ashwarya Nandurkar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
2.	Dhyanal Bhoge	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
3.	Himbeshi S. Bhadani	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
4.	Jankshi S. Jaisankar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
5.	Nisha R. Nirawe	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
6.	Poonika W. Damask.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
7.	Priya P. Gairwad	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
8.	Rutika E. Gole	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
9.	Sakshi S. Sindhika	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
10.	Shivani Dhote	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
11.	Ashwini T. Jarmare	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
12.	Shubhangi R. Kotte	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
13.	Jaumyati V. Naughare	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
14.	Swati M. Rode	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
15.	Swati R. Kaware	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
16.	Nikita Talwekar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
17.	Pooja Gane	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
18.	Prajati Nakade	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
19.	Padmini Kadam	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26
20.	Sakshi Korde	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26



N. K. Kulkarni
 Off. Principal
 Sevaldal Mahila Mahavidyalaya
 Nagpur.



SEVADAL SHIKSHAN SANSTHA'S
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SEVADAL MAHILA MAHAVIDYALAYA
& RESEARCH ACADEMY
 Sakkardara Square, Umrer Road, Nagpur-24

Certificate Course in *Env't Sampling,*
Analysis and Monitoring
 2023-24
 Attendance for the Month of

Total Lectures/
 Practical engaged

Roll No.	NAME	Attendance for the Month of													Total No. of Lectures/ Practical attended															
		2.1.23	4.1.23	6.1.23	9.1.23	10.1.23	12.1.23	16.1.23	19.1.23	23.1.23	27.1.23	30.1.23	1.2.23	6.2.23		8.2.23	11.2.23	14.2.23	17.2.23	22.2.23	26.2.23	3.3.23	6.3.23	10.3.23	14.3.23	16.3.23	20.3.23	23.3.23	27.3.23	31.3.23
1.	Ashwarya Nandekar	P	A	P	P	A	P	P	P	A	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
2.	Ashvanti Bhoge	A	P	P	A	A	P	P	P	A	P	P	A	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3.	Hindashi S. Bhadani	P	A	P	P	P	A	P	P	A	P	P	P	A	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
4.	Jankari S. Pataskar	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
5.	Nisha K. Nirawe	P	A	P	P	A	P	P	P	A	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
6.	Pranita W. Damaik.	P	P	P	A	P	P	A	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7.	Pritya P. Yatikwad	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
8.	Rutika C. Gore	P	A	P	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
9.	Sakshi S. Sundheka	P	P	A	P	A	P	P	P	P	A	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
10.	Shivani Dhote	A	A	P	P	A	P	P	P	P	P	P	A	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11.	Ashvini Titumare.	P	P	A	P	P	P	A	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
12.	Shubhangi R. Katte	P	A	P	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
13.	Soumya V. Narghare	A	P	A	P	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
14.	Srushti M. Rode	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
15.	Swati R. Kaware	A	P	A	P	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
16.	Nikita Talwekar	P	A	P	A	P	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P
17.	Pooja Game	P	P	A	P	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
18.	Pragati Nakade	A	A	P	P	A	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
19.	Banjali Kadam	P	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P
20.	Sakshi Korde	P	A	P	P	A	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P



Off: Principal
 Sevidal Mahila Mahavidyalaya
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Maulik



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Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Certificate of Completion

This certificate is awarded to

Ms. Nikita Talwekar

she has successfully completed the Certificate Course in
"Environmental Sampling, Analysis and Monitoring",
conducted by the Department of Environmental Science.

Date : 30/04/2024



Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Handwritten signature of Mrs. A. A. Chinchmaltpure

Mrs. A. A. Chinchmaltpure
Course Coordinator

Prof. (Mrs.) Nirupama S. Dhoble
Off. Principal

Sevadal Mahila Mahavidyalaya, Nagpur



Sevalal Shikshan Sanstha's
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Sevalal Mahila Mahavidyalaya

Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Certificate of Completion

This certificate is awarded to

Ms. Srushti Rode

she has successfully completed the Certificate Course in
"Environmental Sampling, Analysis and Monitoring".
conducted by the Department of Environmental Science.

Date : 30/04/2024



Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

Nirupama S. Dhoble

Shir
Mrs. A. A. Chinchmaltpure
Course Coordinator

Nirupama S. Dhoble

Prof. (Mrs.) Nirupama S. Dhoble
Off. Principal

Sevalal Mahila Mahavidyalaya, Nagpur

Sevadal Mahila Mahavidyalaya Nagpur

Department of food and Nutrition

**CERTIFICATE COURSE IN CALORIFIC VALUE OF DIFFERENT
FOODS**

Session 2023-2024



Moukhye Off. Principal
Sevadal Mahila mahavidyalaya
Nagpur.

SEVADAL MAHILA MAHAVIDYALAYA, NAGPUR.

Notice

All students of B.Sc. AND B.A.part I, II, III year (semester) SCIENCE, HOME SCIENCE AND ARTS are hereby informed that their CERTIFICATE COURSE in calorific value of different foods start from January 1, 2024. All students interested to join the course and take admission in it.

Jyoti Kamble

Course co-ordinator

Mrs. JYOTI D. KAMBLE

DEPARTMENT OF Food and Nutrition

Sevadal mahila Mahavidyalaya NAGPUR



N Kamble
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Certificate course in Calorific value of Different Foods

Eligibility : BSc . I st Yr. and II nd yr. Home Science

Marking scheme –

Theory -70

Practical -20

Internal Assessment -10

Examination : Theory and practical examination conduct to be separately

Workload

2 theory / week

1 Practical/ week

Teaching Methods

Demonstration

Powerpoint presentations

Practicals

Job Oppportunities

1. Dietitian
2. Diet Counsellor
3. Health club dietitian and calorie maintainance.



N. Deshpande

Off. Principal
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Nagpur.

Caloric Value of Food and its measurement

Caloric Value of Food

the energy accumulated in food substances (proteins, fat, and carbohydrates); the energy value of foodstuffs, expressed in calories (cal) or kilocalories (kcal). The concept is used, for example, in the comparative evaluation of food products and in planning diets.

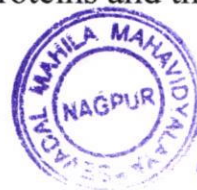
The caloric value is determined by the presence of unoxidized atoms of carbon and hydrogen. A molecule of fat contains more unoxidized atoms of carbon and hydrogen than a carbohydrate molecule or a molecule of protein. One g of fat yields 9.3 kcal (1 kcal = 4.1868×10^3 joules); 1 g of carbohydrate, 4.1 kcal; and 1 g of protein, 4.1 kcal. The following gives the caloric value (in kcal) of some products (per 100 g): milk (kefir, sour milk), 62; butter, 734; first-grade beef, 154; first-grade mutton, 206; ham, 365; choice sausage, 290; eggs, 150; scallions, 21; fresh cucumbers, 15; potatoes 89; cabbage, 27; carrots, 36; apples, 48; lemons, 41; cepes, 32; walnuts, 612; rye bread, 204; and sugar, 390. The caloric value of foodstuffs must be known in order to work out rations, which are determined by the energy expenditures of persons of different occupations, sexes, and ages.

the nutritional value of feeds, for establishing norms of feeding livestock, and for planning feed requirements. The caloric value of dry matter in most feeds is 4.0-4.5 Meal per 1 kg. The useful caloric value of a feed for the animal depends on the digestibility of the feed and the absorbability of the digestible substances.

Caloric Value of Food

How to Measure Calorific Value of Food

The body requires energy for its internal and external work. This is provided by the oxidation of food e.g. carbohydrates, fats, and proteins. The foodstuffs contain varying amounts of carbohydrates, fats, and proteins and therefore, the



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energy obtained from different foods vary. This can be determined by two methods – direct and indirect.

Direct Method:

The caloric value of a foodstuff can be determined by measuring the heat produced when a given amount is completely burnt in oxygen. It is done in a 'bomb calorimeter' where the oxygen is put in under considerable pressure. Since it requires a calorimeter of robust construction, it has been called a bomb calorimeter.

The one commonly used for the purpose is the 'Atwater' bomb calorimeter. It consists of a heavy steel bomb, with platinum or gold plated copper lining. It has a cover which is held tightly by a strong screw-collar. A weighed amount of the sample is placed and the bomb is charged with an oxygen valve. The valve is then closed and the bomb is immersed in a weighed amount of water.

The burning of the sample is set off by an electric spark and the heat liberated is measured by the rise in temperature of the surrounding water by means of a differential thermometer which can read up to one-thousandth of a degree.

Deduction of the heat arising out of accessory combustions is made in order to obtain the heat liberated in calories from the combustion of the actual sample.

Indirect Method:

The caloric value can also be determined indirectly by burning the food in oxygen in an oxy-calorimeter. The volume of oxygen required to burn the food sample is measured and the caloric value is calculated. The energy production is accurately related to oxygen utilization.

The calculation is based on the principle that when 1 litre of oxygen is utilized in the oxidation of organic nutrients, approximately 4.8 Kcal of heat is liberated. The measurement of oxygen consumption which is a relatively simple technique is now universally employed to estimate the metabolic rate. This is 'indirect calorimetry'.

The energy obtained as a result of complete combustion is the potential energy but the energy liberated in the body is not the same, and this is called the physiological energy. Since carbohydrates and fats contain carbon, hydrogen and oxygen, they can be completely burnt to CO₂ and water and hence the potential energy is the same as the physiological energy. However, in the case of the proteins, the nitrogen is eliminated as urea etc. so the physiological energy is less than the potential energy



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Jyoti Basu Mahila Mahavidyalaya
Nagpur.

In our daily lives, we often hear about calories and their importance in our diet. Calories are a measure of the energy content in foods, and they play a crucial role in the functioning of our body. Understanding the caloric content of different foods can help us make informed choices about our diet and energy consumption.

Calories

Types of Calorific Values

There are two primary types of calorific value: higher calorific value (HCV) and lower calorific value (LCV). The difference lies in the treatment of the water vapor produced during the combustion process.

Higher Calorific Value (HCV): Also known as the gross calorific value (GCV), HCV includes the latent heat of vaporization of the water formed during combustion. This value represents the total heat released when the fuel burns completely, and the resulting water vapor remains in the gaseous state.

Lower Calorific Value (LCV): On the other hand, the lower calorific value, also called net calorific value (NCV) or physiologic calorific value (PCV), accounts for the heat energy released during combustion but excludes the latent heat of vaporization of water vapor. It assumes that the water vapor formed during combustion is condensed back into a liquid state, and the heat released during this process is not available for use.

Sources of Calories in Foods

The energy content of foods primarily comes from the catabolism of carbohydrates, proteins, and fats. Each of these macronutrients yields a different amount of energy per gram:

Carbohydrates and proteins yield about 4 kcal/g of energy.

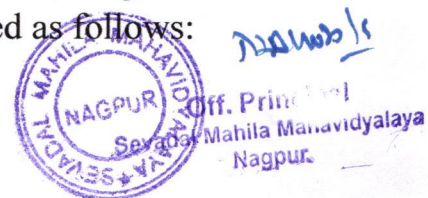
Fats provide a more significant amount of energy, approximately 9 kcal/g.

Alcohol, found in some foods and beverages, yields about 7 kcal/g when metabolized.

The gross calorific value of fats is 9.45 kcal/g, for carbohydrates, it is 4.1 kcal/g and for proteins, it is 5.65 kcal/g.

Calculating caloric content in foods

To determine the number of kilocalories from a specific component in a food item, multiply the number of grams of that component by its respective energy content. For example, if a meal contains 37 grams of carbohydrates, 20 grams of fat, and 15 grams of protein, the caloric content can be calculated as follows:



Ans. Carbohydrates: $37 \text{ g} \times 4 \text{ kcal/g} = 148 \text{ kcal}$

Fat: $20 \text{ g} \times 9 \text{ kcal/g} = 180 \text{ kcal}$

Protein: $15 \text{ g} \times 4 \text{ kcal/g} = 60 \text{ kcal}$

Total kcal in the slice of pizza: $148 \text{ kcal} + 180 \text{ kcal} + 60 \text{ kcal} = 388 \text{ kcal}$.

Making informed food choices

Understanding the caloric content of foods empowers us to make informed choices about our diet and overall health. By being aware of the energy content in different food items, we can make decisions that align with our nutritional goals and lifestyle. Here are some tips to help make mindful food choices:

Choose nutrient-rich foods: Choose foods that provide essential nutrients and a balance of macronutrients (carbohydrates, proteins, and fats) to support overall well-being.

Be mindful of quantity: Pay attention to portion sizes, as large portions of high-calorie foods can contribute to excessive energy intake.

Balance calories with physical activity: Regular physical activity can help balance caloric intake and expenditure, supporting weight management and overall health.

Limit empty calories: Reduce the consumption of foods and beverages with high caloric content but little nutritional value, such as sugary drinks and processed snacks.

Stay hydrated: Choose water or other low-calorie beverages to stay hydrated, as they provide essential hydration without adding extra calories.

Calories measure the energy content in foods. There are two types of calorific values: Higher Calorific Value (HCV) and Lower Calorific Value (LCV). HCV includes all heat released during combustion, while LCV excludes the heat from vaporized water. Carbohydrates and proteins provide about 4 kcal/g, fats about 9 kcal/g, and alcohol about 7 kcal/g. Understanding calories helps make informed food choices for a balanced diet and overall health. Choose nutrient-rich foods, be mindful of portions, balance calories with physical activity, and limit empty calorie intake for a healthier lifestyle.



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Sevalal Mania Mahavidyalaya
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Course Title : Certificate Course in Calorific Values of different Foods

Duration: 3 months

Course Outline and Syllabus

Unit -I

1. Meaning and definition of calorific value of foods
2. Energy ,measurement of Energy , calorie .
3. Basal metabolic rate

Unit -II

- 1.Sources of Calorie , properties of clorie rich foods
2. overweight and undernutrition
3. Calorie deficiency

Unit -III

1. Calorie measurement and unit of energy measurement
2. Calorie content and energy needs of different age groups

Unit -IV

1. Calorie content of different food.
2. calorie rich foods and their importance in diet

Teaching Methodology : Lectures, Practicals and Demonstration
Method



N. D. W. B. / r
Off. Principal
Sevadai Mahila Mahavidyalaya
Nagpur.

Proposed Guest Lecture : NA

Assessment And Evaluation Method – Examination and Papers
evaluation

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Sevadal Mahila Mahavidyalaya
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Sevadal Mahila Mahavidyalaya
Nagpur

SEVADAL MAHILA MAHAVIDYALAYA ,NAGPUR

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NOTICE

All the staff of department of food and nutrition are inform that their certificate course of Calorific Value of Different Foods want to be start and meeting of course arrange in Principals chamber. Hon'ble Principal Sir will chair the meeting and address the gathering on date 10 January 2023 in presence of NAAC Coordinator Dr. A. P. LAMBAT Sir. The Agenda of meeting are as follows.

1. To commence the certificate course in Food And Nutrition.
2. To frame the syllabus of course.
3. Any other matter with the permission of chair,



PRINCIPAL

PROF. PRAVIN CHARDE



Off. Principal
Sevaldal Mahila Mahavidyalaya
Nagpur.

Sevadal Mahila Mahavidyalaya, Nagpur

Place of Higher Learning And Research (Research Academy)

Sakkardara chowk Umred Road Nagpur, 440024

Minutes of Meeting dated Certificate course in

The meeting regarding the certificate course in Calorific value of different food on held on 10 January at 11am in the hon'ble Principal's chamber. Hon'ble Principals sir presided over the meeting

Agenda of meeting

- 1 To commence the Certificate course in
- 2 To frame the Syllabus of the course.
- 3 Any other matter with the permission of the chair.

Following members were present at meeting:

- | | |
|-----------------------------|----------------------|
| 1. Prof.. Pravin Charde | Chairman |
| 2. Dr. Meghali Joharapurkar | Member |
| 3. Mrs. Jyoti D. Kamble | Course Co- Ordinator |

Mrs. Jyoti D. Kamble, Course co-ordinator acted as secretary in the meeting. The co-ordinator welcomed the chairperson, Hon'ble Principal sir and other members and called the meeting in order with the permission of chairperson. The coordinator read out the agenda of meeting and subsequently discussed the matter.

1. Item no. 1: To commence the Certificate course in calorific value of different foods
2. Resolution: Unanimously it was decided to commence the Certificate course in calorific value of different foods from the session 2023- 24
3. Item no. 2: To frame the syllabus of the course.

Resolution: Hon'ble Principal expressed his views regarding the framing of course syllabus Mrs. Jyoti D. Kamble were asked to



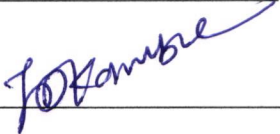


N. Kamble
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.


prepare syllabus of certificate course in calorific value of different foods.

Item no. 3: Any other matter with the permission of the chair.

Resolution: As there was no other matter to discuss the coordinator sum up the meeting by expressing thanks for everyone's gracious attendance.

Name	Signature
1. PROF. PRAVIN CHARDE	
2. Dr. Meghali Joharapurkar	
3. Mrs. Jyoti Kamble	




Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Certificate Course In Calorific Values of Different Foods
List of Students session 2023-2024

- 1 Ms.Ashfiya Firdous Riyaz Khan Pathan
- 2 Ms.Divya Rajendra Bharadwaj
- 3 Ms.Janvi Narendra Paithane
- 4 Ms. Janvi Tilak Khare
- 5 Ms. Komal Zabu Chavan
- 6Ms. Krutika Yeshwant Khairkar
- 7 Ms. Manaswi Anil Selwatkar
- 8 Ms. Mubshera Fatema meer Ashfaque Ali
- 9 Ms. Purnashvi Khushal Bahe
- 10 Ms. Ruchika Vilas Bhongade
- 11 Ms. Rumaysha Naaz shahjad Mulla
- 12 Ms. Saba Anjum Moiun Qureishi
- 13 Ms.Saniya Rizwan Khan
- 14 Ms. Shahin Sadaf Ansar Sheikh
- 15 Ms.. Shruti D. Jawade
- 16 Ms. Sonal Sureshrao Wadichar
- 17 Ms. Tanisha R. Mahajan
- 18 Ms. Ramchandra Awazad
- 19 Ms. Trisha Prakash Bhonde
- 20 Ms. Vaishnavi Rajesh Sayawan
- 21 Ms. Yamini Bhalchandra Lonare

Course Coordinator
J. Kamble
Mrs. Jyoti D. Kamble



M. Kamble
Office In-charge
Sevadati Mahila Mahavidyalaya
Sevadati Mahila Mahavidyalaya
Nagpur.

OUTCOME FROM THE COURSE

Certificate course in Calorific value of Different foods

1. Learn and develop skill about calorific value.
2. Learn how to measure the calorific value.
3. Develop and cook the recipe rich in calorific value of different foods
4. Improvement in knowledge about the course



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Sevalal Mahila Mahavidyalaya
Nagpur.

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Certificate Course In Calorific Values of Different Foods
List of Students session 2023-2024

Evaluation Sheet of Certificate course calorific value of Different foods

Name of Students	GRADE
1 Ms.Ashfiya Firdous Riyaz Khan Pathan	A
2 Ms.Divya Rajendra Bharadwaj	A
3 Ms.Janvi Narendra Paithane	A
4 Ms. Janvi Tilak Khare	A
5 Ms. Komal Zabu Chavan	A
6Ms. Krutika Yeshwant Khaikar	A
7 Ms. Manaswi Anil Selwatkar	A
8 Ms. Mubshera Fatema meer Ashfaque Ali	A
9 Ms. Purnashvi Khushal Bahe	A
10 Ms. Ruchika Vilas Bhongade	A
11 Ms. Rumaysha Naaz shahjad Mulla	A
12 Ms. Saba Anjum Moiun Qureishi	A
13 Ms.Saniya Rizwan Khan	A
14 Ms. Shahin Sadaf Ansar Sheikh	A
15 Ms.. Shruti D. Jawade	A
16 Ms. Sonal Sureshrao Wadichar	A
17 Ms. Tanisha R. Mahajan	A
18 Ms. Ramchandra Awazad	A
19 Ms. Trisha Prakash Bhonde	A
20 Ms. Vaishnavi Rajesh Sayawan	A
21 Ms. Yamini Bhalchandra Lonare	A

Nawable
Off. Principal
Sevadal Mahila Mahavidyala
Nagpur.



J.D. Kambale
(Mrs. J.D. Kambale)



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Sevadal Mahila Mahavidyalaya

Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Certificate of Completion

This certificate is awarded to

Ms. Spurti Wandhare

she has successfully completed the Certificate Course in

"Calorific Value of Different Foods",

conducted by the Department of Food & Nutrition (Home Science).

Date : 30/04/2024

JDKamble

Mrs. Jyoti D. Kamble
Course Coordinator

Ndhoble

Prof. (Mrs.) Nirupama S. Dhoble
Off. Principal

Sevadal Mahila Mahavidyalaya, Nagpur



Ndhoble
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



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Place for Higher Learning & Research (Research Academy)

Sakkardara Square, Umrer Road, Nagpur-440 024

E-mail: sevamahilamv@gmail.com

Website: www.sevalalmahilamahavidyalaya.ac.in

Certificate Course in FOOD PRESERVATION

Department of Home Economics

Dr. Sanghmitra D. Kolarkar
Course Co-ordinator

Session : 2023-2024

Neelam

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Sevadal Mahila Mahavidyalaya, Nagpur
Department of Home Economics

Certificate Course in
Report of
Food Preservation Course

The department of Home Economics runs the certificate course in 'Food Preservations' during academic session 2023-2024. The course duration was 3 months. The evaluation of course was based on Gradation System, A - Above 75%, B-Above 60%, C-Above 50%. Total 27 students appeared for examination and have successfully passed the course. This course has received good response from the students. This course was taken by the college for the purpose of making the students venture a new 'Start-up' in their life such as entrepreneurship.

All students enthusiastically participated in this course and attended theory classes and demonstrations with practical work regularly. Guest lecture arranged for more details for students. Assignment grades are based on their performance. Students prepared preserved foods on their own and submitted to the department. In this manner students completed the food preservation course and were able to prepare preserved food and their techniques, different methods and all essential things related with the subject.



Theory & Practical – Faculty with students

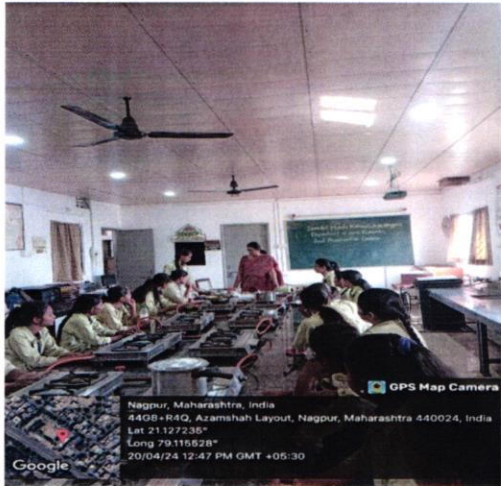
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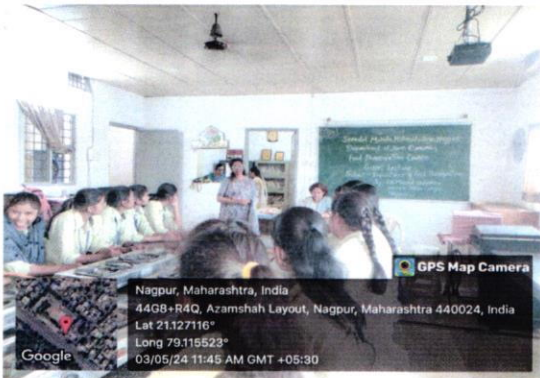


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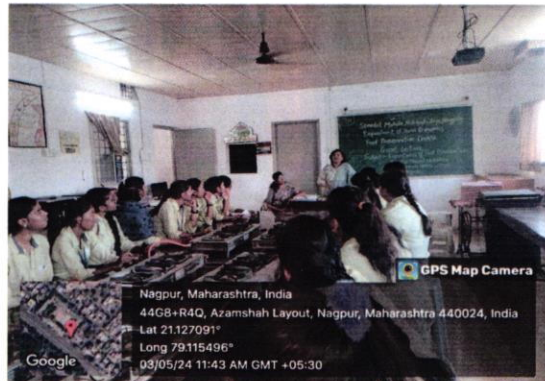


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Theory & Practical – Faculty with students



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Guest lecture on “Importance of Food Preservation” by Dr. Mrunal Waliokar , Kamla Nehru College Nagpur. Dated-3/5/2024

N. S. Dhoble
 Prof. N. S. Dhoble)
 Off. Principal,
 Sevadal Mahila Mahavidyalaya,,Nagpur.



N. S. Dhoble
 Off. Principal
 Sevadal Mahila Mahavidyalaya
 Nagpur.

S. D. Kolarkar
 (Dr. S. D. Kolarkar)
 Course Co-ordinator



Certificate Course in Food Preservation

Food preservation, any of a number of methods by which food is kept from spoilage after harvest or slaughter. Such practices date back to prehistoric times. Among the oldest methods of preservation are drying, refrigeration and fermentation. Modern methods include canning, pasteurization, freezing, irradiation and the addition of chemicals. Advancement in packaging materials has importance in food preservation.

The course is completely entrepreneurship oriented and includes various techniques that are expected for self employment. Hence the students will be well versed with advanced technique which is the need of the hour for providing employment opportunities.

Food preservation is something that should be understood by anyone who handles food, whether for their own use or employment. Self employment opportunities is available in food preservation. Therefore this course deals mainly with various food products and their preservation techniques. It is a great delight to be able to preserve delicious Food. All it need is a bit of skill and training to be able to do this and this is an art which does not need a lot of heavy infrastructure and one can easily start earning with a small unit at home.

The add-on course on food preservation a practical approach aims to equip students with essential skills in preserving food through hands on experiences. Students will gain a deep understanding of food safety, quality maintenance and cost effective preservation methods. Moreover, entrepreneurial attitude will be developed in the students.



Programme Outcome

The Certificate Course in "Food Preservation" aims to train the students for an entrepreneurship. The course further educates the students on entrepreneurial approaches. By the end of the certificate course, the students will learn following things:

1. To develop the knowledge of need of food preservation and learn various Preservation techniques.
2. To impart knowledge on the different techniques used in preservation of food.
3. To be able to conduct healthy food preparation, including seasonal recipe development, preservation, food safety and handling.
4. Self employment in preservation of food.

The course further educates the participants on entrepreneurial approaches. Students will be able to do self employment in preservation of food.

Objective of the Course :

- To study the food spoilage.
- To provide knowledge and development of food preservation and preservation techniques.
- To know the importance and basic principles of food preservation.
- To Introduce the students in the job opportunities in food preservation.
- To develop Marketing and Entrepreneurship skills to enhance employability



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Place for Higher learning and Research (Research Academy)
Sakkardara Chowk, Umrer Road Nagpur-440024

Date : 10th Jan., 2024

NOTICE

All the members of the department of Home Economics here by informed that the meeting regarding the certificate course in '**Food Preservation**' has been scheduled on 15th Jan., 2024 at 11.00 am at the honourable principal's chamber.

Hon'ble Principal sir will chair the meeting in presence of Dr. A. P. Lambat, NAAC coordinator.

Agenda of meeting:

- 1) To commence the Certificate course in 'Food preservation'.
- 2) To frame the syllabus of the course.
- 3) Any other matter with the permission of the chair.



Dr. Mrs. S. D. Kolarkar
Course Coordinator

Copy to:

Asso. Prof. A. P. Lambat, NAAC Coordinator

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Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



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SEVADAL MAHILA MAHAVIDYALAYA

Place for Higher learning and Research (Research Academy)
Sakkardara Chowk, Umrer Road, Nagpur_440024

Minutes of Meeting dated 15th Jan. 2024 Certificate course in 'Food preservation'

The meeting regarding the certificate course in "Food preservation" was held on 15th Jan. 2024 at 11.00 am in the hon'ble principal's Chamber. .Hon'ble Principal sir presided over the meeting.

Agenda of the meeting:

- 1) To commence the certificate course in 'Food preservation'.
- 2) To frame the syllabus of the course.
- 3) Any other matter with the permission of the chair.

Following Memembers were present:

- | | |
|------------------------------------|--------------------|
| 1) Prof. Pravin Charde Principal | Chairman |
| 2) Asso. Prof. Dr. A. P. Lambat | IQAC coordinator |
| 3) Asso. Prof. Dr. S. D. Kolarkar | Course Coordinator |
| 4)Asst. Prof. Dr.P. A. Chinchkhede | Member |

Dr. Sanghmitra Kolarkar, course coordinator acted as secretary in the meeting. The coordinator welcomed the chairperson, Hon'ble principal and other members and called the meeting in order With the permission of chairperson. The coordinator read out the agenda of meeting and subsequently discussed the matter.

- 1) Item no.1: To commence the certificate course in "Food preservation"

Resolution: Unanimously it was decided to commence the certificate course in 'Food preservation' from the session 2023-24.

- 2) Item no.2 : To frame the syallabus of the course.

Resolution: Hon'ble Principal expressed his views regarding the framing of course syllabus. Dr.Mrs. S. D. Kolarkar and Dr. Mrs. P. A. Chinchkhede


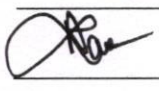

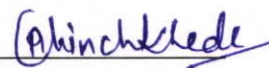
Signature
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



were asked to prepare syllabus of the certificate course in " Food preservation"

3) Item no.3: Any other matter with the permission of chair.

Resolution: As there was no other matter to discuss, the coordinator sum up the meeting by expressing thanks for everyone's gracious attendance.

Name:	signature
1) Hon'ble Prof.Pravin Charde	
2) Dr. A. P. Lambat	
3) Dr. Mrs. S. D. Kolarkar	
4) Dr. Mrs. P. A. Chinchkhede	



Nauoblr

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



NAAC RECREATED WITH 'A' GRADE
SEVADAL MAHILA MAHAVIDYALAYA
Place for Higher learning and Research (Research Academy)
Sakkardara Chowk, Umrer Road Nagpur-440024

Date :18th Jan, 2024

NOTICE

All the members of the department of Home Economics here by informed that the meeting regarding the certificate course in '**Food Preservation**' has been scheduled on 20th Jan, 2024 at 11.00 am at the Hon'ble principal's chamber.

Hon'ble Principal sir will chair the meeting in presence of Dr. A. P. Lambat, NAAC coordinator.

Agenda of meeting:

- 4) To confirm the minutes of the last meeting.
- 5) To review the progress of framing the syllabus of 'Food Preservation'.
- 6) Any other matter with the permission of the chair.

S.D.

Dr. Mrs. S. D. Kolarkar
Course Coordinator

Copy to:

Asst. Prof. A. P. Lambat, NAAC Coordinator

NAAC

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



NAAC RE-CREATED WITH 'A' GRADE

SEVADAL MAHILA MAHAVIDYALAYA

Place for Higher learning and Reseach (Research Academy)
Sakkardara Chowk, Umrer Road, Nagpur_440024

Minutes of Meeting dated 20th Jan, 2024 Certificate course in 'Food preservation'

The meeting regarding the certificate course in "Food preservation" was held on 20th Jan, 2024 at 11.00 am in the hon'ble principal's Chamber. .Hon'ble Principal sir presided over the meeting.

Agenda of the meeting:

1. To confirm the minutes of the last meeting.
2. To review the progress of framing the syllabus of 'Food Preservation'
3. Any other matter with the permission of the chair.

Following Memebers were present:

- | | |
|------------------------------------|--------------------|
| 1) Prof. Pravin Charde Principal | Chairman |
| 2) Asso. Prof. A. Lambat | IQAC coordinator |
| 3) Asso. Prof. Dr. S. D. Kolarkar | Course Coordinater |
| 4)Asst. Prof. Dr.P. A. Chinchkhede | Member |


Dr. Sanghmitra Kolarkar, course coordinator acted as secretary in the meeting. The coordinator welcomed the chairperson, Hon'ble principal and other members and called the meeting in order With the permission of chairperson. The coordinator read out the agenda of the meeting and subsequently discussed the points according to the agenda of the meeting.

- 7) **Item no.1:** To confirm the minutes of the last meeting.



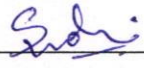

Resolution: The minutes of the last meeting held on 20th Jan,2024 were read by the course coordinator and after through discussion the minutes were unanimously approved.

- 8) **Item no.2 :** To review the progress of framing the syllabus of ' Food preservation'

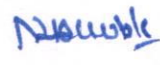
Narvoble
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur,



Resolution: Course coordinator tabled the newly framed syllabus of Certificate course in "Food preservation" in the meeting . After thorough discussion it was approved unanimously.

Name:	signature
1) Hon'ble Prof.Pravin Charde	
2) Dr. A. P. Lambat	
3) Dr. Mrs. S. D. Kolarkar	
4) Dr. Mrs. P. A. Chinchkhede	




Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



Sevadal Mahila Mahavidyalaya

Place for Higher Learning & Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Syllabus

Certificate Course in Food Preservation

Theory

Unit -I Food contamination & spoilage: concept, definition, difference, between contamination & spoilage, signs of contamination and spoilage in food , types of food poisoning , introduction to disease caused by spoiled food contamination of different food. Important microorganisms for food, used necessity of microbes in food preparations

Unit- II Introduction to food preservation: Introduction, definition and scope of food science and technology, historical development of food processing and preservation, concept, importance of food preservation, methods of food preservation, physiology changed condition, moisture content, principles of preservation.

Unit -III Chemical preservation: Preservation of food by use of sugar, salt, chemicals, antibiotics and by smoking concentration: Application in food industry processes and equipment for manufacture of various concentration foods and their keeping quality, fermentation, Application in preservation of food pickling, curing, etc., Radiation: source of radiation, mode of action effect on microorganisms and different nutrients dose requirements for radiation preservation of food.

Unit -IV Preservation by drying: Concept, history, types of drying and dryers, treatments prior to drying, preservation by use of high temperature & low temperature: concept and importance, various methods used – pasteurization,

boiling, sterilization and UHT processing, : blanching, canning, effect of high temperature on microbial content of food, Commodities, Costing and Accounts : purchasing and sales maintaining account procedure in cost price, calculating selling price, gross profit, net profit, products of packing, labling, and marketing.

Practical :

- 1) Type of Pickle – Lemon, Mango, Chilli.
- 2) Jams, Jellies, Sauces
- 3) Blanching methods for vegetables – Bioling water or steam method
- 4) Canning methods- The food contents are sealed in an airtight container at high temperatures.
- 5) Dehydration

REFERANCE BOOKS

1. Food Microbiology by William Frazier
2. Food Microbiology by W.M.Faster
3. Laboratory manual of Food Microbiology by Neelima Garg, K.L.Garg
4. Fundamental Food Microbiology by Biber Ray & Arunbhuia.

Activities:

1. Two days workshop on "food Preservation"
2. Arrange guest Lecture on " Skill development : Marketing & Packning"
3. Visit- Cottage Industry.

Destribution of Marks

Practical Examination (40 Marks)

- 1) Preperation and presentation of one preservative product - 20 Marks
- 2) Calculation of selling and cost Price of the Prepared Products- 10 Marks
- 3) Menu Card - 05 Marks
- 4) Record Book - 05 Marks

Internal Assesment on Activities :

- 1) Field Trip to Cottage Industry - 05 Marks
- 2) Attendance in Guest lecture & Workshop - 05 Marks
- 3) Report writing of the above program- 10 Marks

N.S. Dhoble

(Prof. N. S. Dhoble)
Off. Principal,
Sevadal Mahila Mahavidyalaya,,Nagpur.



S.D. Kolarkar

(Dr. S. D. Kolarkar)
Course Co- ordinator

N.S. Dhoble
Off. Principal,
Sevadal Mahila Mahavidyalaya,
Nagpur.

Teaching Activity:

- To start with 1 Batch of minimum 16 Students.
- Admission is for one session.

Course Duration – (40 Hrs)

Rules and Regulation :

- There will be 2 hours/ week for theory.
- There will be 2 hours/ week/ per batch for practical.
- Theory paper will be of 40 Marks and 2 hours. duration.
The practical Examination shall be of 40 marks .

Scheme of Evaluation :

- Theory Examination- 40 marks
- Practical Examination- 40 marks
- Internal Practical Assessment– 20 marks



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SEVADAL MAHILA MAHAVIDYALAYA

Place for Higher learning and Research (Research Academy)
Sakkardara chowk, umrer Road, Nagpur-440024

Date : 20th Jan. 2024

NOTICE

All the students are hereby informed that the certificate course in “**Food presevation**” run by department of Home Economics designed to enhance startup in Food preservative products.

Interested students should contact following teachers for admission before 30th Jan. 2024.

- 1) Dr. Mrs. Sanghmitra Kolarkar, HOD, Home Economics.
- 2) Asst. Prof. Dr. Mrs. Prabha Chinchkhede



Dr. Mrs. S. D. Kolarkar
Course Coordinator



Prof. Pravin Charde
Principal
Sevalal Mahila Mahavidyalaya
Nagpur.



Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.



Sevadal Mahila Mahavidyalaya

Place for Higher Learning & Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Certificate Course in Food Preservation List of Admitted Student

Sr.no	Name of the Students	Class	Mobile No.
1.	Ku. Akansha .A .Barahate	B.A.II	8010427460
2.	Ku .Ranu S. Mule	B.A.II	9403376448
3.	Ku .Achal D. Thawkar	B.A.II	9699705304
4.	Ku .Nikita R. Yadav	B.A.II	9284176831
5.	Ku .Minal K. Shende	B.A.II	9579685215
6.	Ku .Khushi H. Kachware	B.A.II	8390219295
7.	Ku .Mayuri S. Rangari	B.A.II	8080345837
8.	Ku. Laxmi T. Kaware	B.A.II	9665697365
9.	Ku. Sonam S. Bandhate	B.A.II	7304435703
10.	Ku. Suhani N. Bondre	B.A.II	9022897272
11.	Ku. Shraddha P. Waghmare	B.A.II	7666574179
12.	Ku. Punam P. Meshram	B.A.II	8552089313
13.	Ku. Kashish V. Nagrare	B.A.II	7823888049
14.	Ku. Ashwini Dhenge	B.A. II	8208629226
15.	Ku. Nidhi .S.Kathe	B.A.III	7558704474
16.	Ku .Nandini M. Sawalakhe	B.A III	9309078022
17.	Ku .Shruti .R. Shinde	B.A III	9322493089
18.	Ku .Mahek .S .Pathan	B.A III	8766591060
19.	Ku. Minal .A .Ganvir	B.A. III	9172495425
20.	Ku .Pratima V. Haware	B.A.III	7058438706
21.	Ku .Kalpana .K .Uikey	B.A III	7020176654
22.	Ku. Sonu S. Kumbhalkar	B.A III	7057152597
23.	Ku. Sakshi N. Pande	B.A.III	7447556139
24.	Ku. Ruchika M. Giripunje	B.A.III	7249689669
25.	Ku. Prajakta S. Sarangpure	B.A.III	9767998217
26.	Ku. Pushpa M. Atkhare	B.A III	9527023060
27.	Ku. Vaishanvi I. Dadmal	B.A III	7666253723
28.	Ku. Nishika N. Rangari	B.A.III	9834641703
29.	Ku. Krutika .Titarmare	B.A.III	7821927711

N.S.Dhoble
Prof. N. S. Dhoble
Off. Principal,
Sevadal Mahila Mahavidyalaya,,Nagpur.



S.D.Kolarkar
(Dr. S. D. Kolarkar)
Course Co-ordinator

N.S.Dhoble
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



NAAC RECREATED WITH 'A' GRADE

SEVADAL MAHILA MAHAVIDYALAYA

Place for Higher learning and Research (Research Academy)

Sakkardara Chowk, Umrer Road Nagpur-440024

Date :20th April, 2024

NOTICE

All the students are hereby informed that the certificate course in “**Food presevation**” are hereby informed that the Internal Written and Practical Examination will be held on 5.05.2024 at 12.00pm and 8.05.2024 at 12.00pm respectively in the college Food & Nutrition Laboratory students are directed to remain present.



Dr. Mrs. S. D. Kolarkar
Course Coordinator



Prof. Mrs. N. S. Dhoble
Off. Principal
Sevadal Mahila Mahavidyalaya,
Nagpur.



Off. Principal
Sevadal Mahila Mahavidyalaya,
Nagpur.



सेवादल महिला महाविद्यालय, नागपूर.
गृह अर्थशास्त्र विभाग
अन्नसंरक्षण (Food Preservation) सर्टिफिकेट कोर्स
लेखी परीक्षा, 2024

वेळ - 3 तास

गुण -40

प्र.1 अन्नसंरक्षणाच्या कोणत्याही दोन पद्धती सविस्तर लिहा. 10
किंवा

खाद्यपदार्थात आंतरिक कारणाने होणारी अन्नविषबाधा लिहा.

प्र.2 तापमानाला नियंत्रित करून अन्नसंरक्षण करण्याची पद्धती सविस्तर लिहा 10
किंवा

अन्न खराब होण्याची कारणे लिहा.

प्र. 3 संक्षिप्त लिहा.10

अ. पाश्चरायझेशन

ब. बाटल्यांद्वारे अन्नसंरक्षण

किंवा

क. डब्बाद्वारे अन्नसंरक्षण

ड . निर्जलीकरण

प्र. 4 संक्षिप्त लिहा.10

अ.अन्न संरक्षणाचे महत्त्व

ब. अन्न विषबाधित होऊ नये म्हणून प्रतिबंधक उपाय

प्र.5 अति संक्षिप्त लिहा. 10

अ. साखर मीठ तेल व मसाल्याच्या सहाय्याने अन्नसंरक्षण

ब. अन्नपदार्थाला विषयुक्त करणाऱ्या जिवाणूंची नावे

क. रासायनिक अन्नसंरक्षकाची नावे

ड. परजीवी कीटक

M. Duobk

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



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Sevadal Mahila Mahavidyalaya

Place for Higher Learning & Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Certificate Course in Food Preservation Academic Session : 2023-2024 Marksheet

Sr. no	Name of the Students	Marks Obtained				Grade
		Theory (40)	Practical (40)	Internal Assessment (20)	Total (100)	
1.	Ku. Akansha .A .Barahate	25	35	18	78	A
2.	Ku .Ranu S. Mule	24	35	17	76	A
3.	Ku .Achal D. Thawkar	25	32	18	75	A
4.	Ku .Nikita R. Yadav	22	35	18	75	A
5.	Ku .Minal K. Shende	25	36	18	79	A
6.	Ku .Khushi H. Kachware	30	36	19	85	A
7.	Ku .Mayuri S. Rangari	25	35	17	77	A
8.	Ku. Laxmi T. Kaware	27	30	18	75	A
9.	Ku. Sonam S. Bandhate	32	30	18	80	A
10.	Ku. Suhani N. Bondre	25	33	17	75	A
11.	Ku. Shraddha P. Waghmare	27	34	16	77	A
12.	Ku. Punam P. Meshram	32	33	17	82	A
13.	Ku. Kashish V. Nagrare	32	33	18	83	A
14.	Ku. Ashwini Dhenge	33	31	16	80	A
15.	Ku. Nidhi .S.Kathe	37	38	19	94	A
16.	Ku .Nandini M. Sawalakhe	34	36	18	88	A
17.	Ku .Shruti .R. Shinde	32	35	15	82	A
18.	Ku .Mahek .S .Pathan	36	37	19	92	A
19.	Ku. Minal .A .Ganvir	27	31	17	75	A
20.	Ku .Pratima V. Haware	30	30	16	76	A
21.	Ku .Kalpana .K .Uikey	30	30	17	77	A
22.	Ku. Sonu S. Kumbhalkar	38	37	19	94	A
23.	Ku. Sakshi N. Pande	34	34	19	87	A
24.	Ku. Ruchika M. Giripunje	30	32	18	80	A
25.	Ku. Prajakta S. Sarangpure	31	30	18	79	A
26.	Ku. Pushpa M. Atkhare	30	29	16	75	A
27.	Ku. Vaishanvi I. Dadmal	30	33	18	81	A
28.	Ku. Nishika N. Rangari	32	32	17	81	A
29.	Ku. Krutika .Titarmare	31	30	16	77	A

N. S. Dhoble

Prof. N. S. Dhoble
Off. Principal,
Sevadal Mahila Mahavidyalaya,,Nagpur.



S. D. Kolarkar
(Dr. S. D. Kolarkar)
Course Co-ordinator

N. S. Dhoble

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



NAAC RE-ACCREDITED WITH 'A' GRADE
SEVADAL MAHILA MAHAVIDYALAYA
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SEVADAL MAHILA MAHAVIDYALAYA
Place for Higher learning and Research (Research Academy)
Sakkardara Chowk, Umrer Road Nagpur-440024

Date :20th April, 2024

NOTICE

All the members of the department of Home Economics here by informed that the meeting regarding the certificate course in '**Food Preservation**' has been scheduled on 25th April, 2024 at 11.00 am at the Hon'ble principal's chamber.

Hon'ble Principal sir will chair the meeting in presence of Dr..A. P. Lambat, NAAC coordinator.

Agenda of meeting:

- 9) To confirm the minutes of the last meeting.
- 10) To review the progress of the course 'food preservation'.
- 11) Any other matter with the permission of the chair.


S.D.

Dr. Mrs. S. D. Kolarkar
Course Coordinator

Copy to:

Asst. Prof.A. P. Lambat, NAAC Coordinator

NAAC
Off. Principal
Sevadal Mahila Mahavidya
Nagpur.



NAAC RE-CREATED WITH 'A' GRADE

SEVADAL MAHILA MAHAVIDYALAYA

Place for Higher learning and Reseach (Research Academy)
Sakkardara Chowk, Umrer Road, Nagpur_440024

Minutes of Meeting dated 25th April, 2024 Certificate course in 'Food preservation'

The meeting regarding the certificate course in "Food preservation" was held on 20th April, 2024 at 11.00 am in the hon'ble principal's Chamber. .Hon'ble Principal sir presided over the meeting.

Agenda of the meeting:

4. To confirm the minutes of the last meeting.
5. To review the progress of the course 'Food Preservation'
6. Any other matter with the permission of the chair.

Following Memebers were present:

- | | | |
|------------------------------------|---------------|--------------------|
| 1) Prof.Mrs. N.S.Dhoble | Off Principal | Chairman |
| 2) Asso. Prof. A. Lambat | | IQAC coordinator |
| 3) Asso. Prof. Dr. S. D. Kolarkar | | Course Coordinator |
| 4)Asst. Prof. Dr.P. A. Chinchkhede | | Member |

Dr. Sanghmitra Kolarkar, course coordinator acted as secretary in the meeting. The coordinator welcomed the chairperson, Hon'ble principal and other members and called the meeting in order With the permission of chairperson. The coordinator read out the agenda of the meeting and subsequently discussed the points according to the agenda of the meeting.


Item no.1: To confirm the minutes of the last meeting.

Resolution: The minutes of the last meeting held on 15th Jan, 2024 were read by the course coordinator and after through discussion the minutes were unanimously approved.

Item no.2 : To review the progress of the course 'Food Preservation

Resolution: Course coordinator presented exam result of the Certificate course in " "Food preservation" in the meeting . It was approved unanimously

Noble
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



Item no.3 : Any other matter with the permission of the chair.

Resolution: Hon'ble Principal Madam instructed to distribute certificate to the students on the accomplishment of certificate course.

Name:	signature
1) Hon'ble Prof. Mrs. N. S. Dhoble	<u>N. S. Dhoble</u>
2) Dr. A. Lambat	<u>A. Lambat</u>
3) Dr. Mrs. S. D. Kolarkar	<u>S. D. Kolarkar</u>
4) Dr. Mrs. P. A. Chinchkhede	<u>P. A. Chinchkhede</u>



N. S. Dhoble
Off. Principal
Sevadai Mahila Mahavidyalaya
Nagpur.

A circular purple stamp with the text "SEVADAI MAHILA MAHAVIDYALAYA" around the perimeter and "NAGPUR" in the center.



Sevadal Shikshan Sanstha's
NAAC RE-ACCREDITED WITH 'A' GRADE

Sevadal Mahila Mahavidyalaya

Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Certificate of Completion

This certificate is awarded to

Ms. Akansha Barahate

she has successfully completed the Certificate Course in

"Food Preservation",

conducted by the Department of Home Economics

Date : 30/04/2024

S.D.

Dr. (Mrs.) S. D. Kolarkar
Course Coordinator



Nirupama

Prof. (Mrs.) Nirupama S. Dhoble
Off. Principal

Sevadal Mahila Mahavidyalaya, Nagpur

Nirupama



SEVADAL MAHILA MAHAVIDYALAYA NAAC RE-REACCREDITED WITH 'A' GRADE

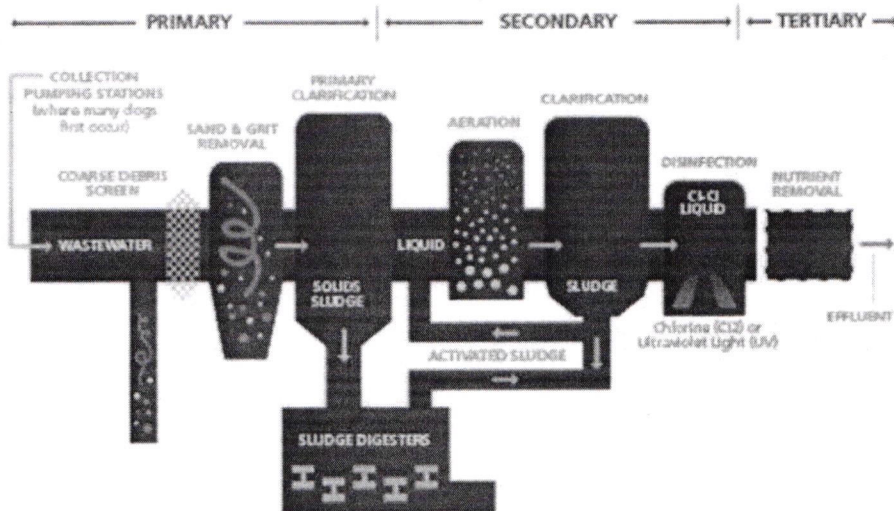
Place for Higher Learning & Research (Research Academy)

Sakkardara Square, Umrer Road, Nagpur-440024

REPORT

ON

Certificate Course (Sewage Treatment Process)



SESSION 2023-24

Nasrullah
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



Report on Certificate Course (Sewage Treatment Process): (2023-24)

Certificate Courses are a great value addition to the affiliating university curriculum. They widen the area of curriculum and strengthen the content in the curriculum. The Institution duly recognizes the key role of certificate courses in enhancing the skills of the UG students. Therefore, the College offers certificate courses through various departments to cater the needs of the students. A set of syllabus is adopted for each course with specified objectives and outcomes, and it is taught by a qualified faculty member/trainer.

During the course, one formative assessment theory, practical test and assignment work was conducted to monitor the student progress and provide feedback for improvement. A summative assessment test is conducted for a total of 100 marks, with 40 marks as the qualifying mark. Certificates are distributed to the students who successfully completed the course and met the qualifying marks. In the academic year 2023-24, the sixteen students enrolled for this course. This offline program was offered on every Wednesday and Thursday at 2.00 pm to 3.00 pm from October 25, 2023 for one hour.

Certificate course on Sewage Treatment Process started on 25 October 2023 with a target to give knowledge about basic laboratory management to science students and sewage treatment process and designing plant by practical and theoretical method. Sixteen students from B.Sc. II joined and all students completed the course successfully. The course covered basic treatment techniques like Preliminary, Secondary and Tertiary Treatment, sampling techniques, safety and precautionary measures in laboratory. Students showed interest in knowing above course.



Learning outcomes:

- Students understand the basic concepts of sewage samples and sources.
- Students were able to prepare reagents and solution.
- Students gained knowledge about treatment and STP Design.
- Students learned about different types of analysis.

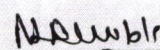
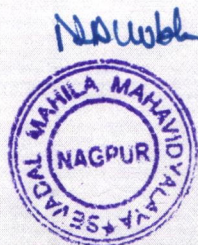
Course Outcomes:

- Students understand the basic concepts of laboratory.
- Students can analyse water and sewage samples.
- Students learned different instrumental analytical methods.
- Students can do scientific calculations.

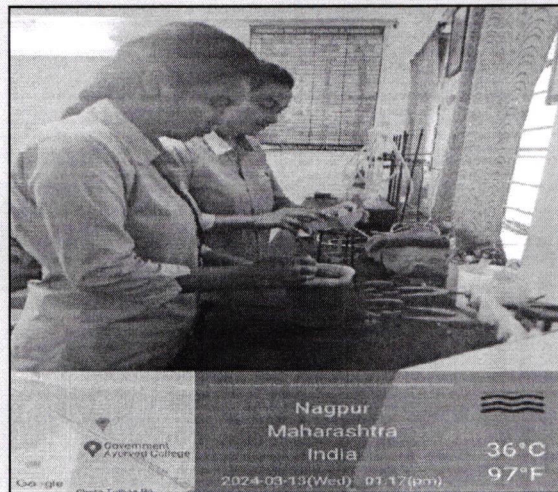
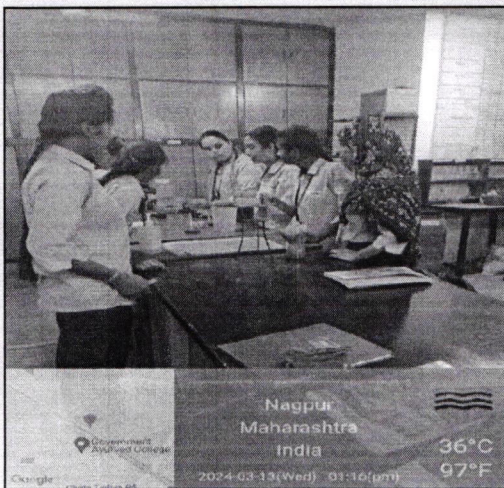
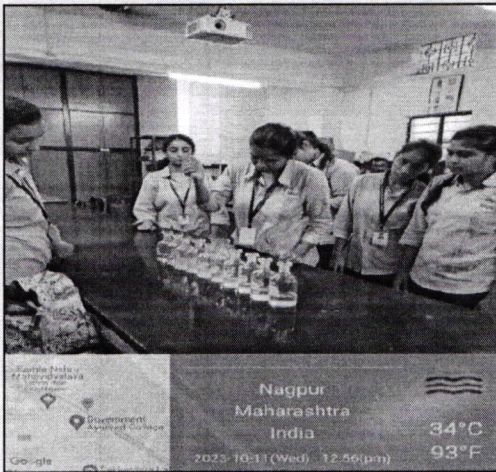
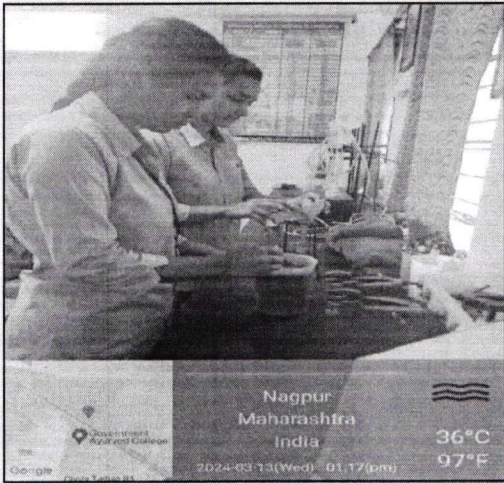
Course covered the concepts such as water quality parameters, water sampling and analysis, site selection, collection of sewage sample and analysis. Finally the course succeeds in making students able to analyse and assess water and sewage which is essential in various industries for maintain water resource by recycling process through STP. Students learned different instrumental analytical methods. Students can do scientific calculations. It is useful to every science to learn about the analysis of water and sewage which is useful in applying industrial unit. Course Coordinator targeted to give basic designing and plant knowledge to join and completed the course is benefitted to open job opportunity for students to work in industrial sector and earn.

Date: 29-04-2024

Dr. Mrs. Bharati S. Tapase
Course Coordinator



Prof. N.S. Dhoble
Officiating Principal
S. M. Mahavidyalaya, Nagpur.



Analysing sewage sample through various practical's

Nalobal
SEWAGE TREATMENT PLANT
MAHILA MAHAVIDYALAYA
NAGPUR

Sevadal Mahila Mahavidyalaya

Place for Higher Learning & Research (Research Academy)
Sakkaradara Square, Umrer Road, Nagpur-440024

Notice

Date: 26-10-2023

Environmental Science Under Graduate Department of Sevadal Mahila Mahavidyalaya, Nagpur is organizing three months offline certificate course on 'Sewage Treatment Process' starting in the month of **October 2023**. the course will be held on Wednesday and Thursday from 2.0 PM to 3.0 PM. No application fees for the college students. Interested students are enrolling their name for the above course should contact Assistant Professor Dr. Mrs. B.S.Tapase, Coordinator of the Certificate Course.

B.S. Tapase

Coordinator
Dr. Mrs. B.S.Tapase



Pravin Charde

Prof. Pravin Charde
Principal
Sevadal Mahila Mahavidyalaya, Nagpur.

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SEVADAL MAHILA MAHAVIDYALAYA

Place for Higher learning & Research- (Research Academy)
Sakkardara Chowk Umrtr Road' Nagpur-440024

Date – 22/10/2023

NOTICE

The members of the Science faculty are hereby informed that the meeting regarding the Certificate Course has been scheduled on 22nd October 2023 at 11.00 am at the Hon'ble Principal's Chamber'

Hon'ble Principal will chair the meeting in presence of 'Dr. A. P. Lambat' NAAC Coordinator.

Agenda of the meeting :

- 1) To Review progress of framing syllabus of Certificate course.
- 2) Any other matter with the permission of the chair.



AS Tapase
Dr. Bharati S. Tapase
Assistant Professor
Course Coordinator

SEVADAL MAHILA MAHAVIDYALAYA

Place for Higher learning & Research- (Research Academy)
Sakkardara Chowk Umrtr Road' Nagpur-440024

Minutes of the Meeting dated 26/10/2023 . Certificate Course in "Sewage Treatment Process"

The meeting regarding the Certificate Course in ' held on 25/10/2023 at 11.00 am in the Hon'ble Principal's Chamber' Hon'ble Principal Sir presided over the meeting.

Agenda of the meeting:

- 1) To Review progress of framing syllabus of Sewage Treatment Process.
- 2) Any other matter with the permission of the chair.

Following Members were Present:

- | | |
|-----------------------------------|--------------------|
| 1) Dr. Pravin Charde, | Chairman |
| 2) Associate. Prof. Ashish Lambat | IQAC Coordinator |
| 3) Asst. Prof Dr. B.S.Tapase | Course Coordinator |

Dr. Mrs. Bharati S. Tapase, Course Coordinator acted as secretary in the meeting' The Coordinator welcomed the Chairperson, Hon'ble Principal and other members and called the meeting in order with the permission of chairperson. The coordinator read out the agenda of the meeting and subsequently discussed the matter.

Item No.1: To review the progress of framing the syllabus of 'Sewage Treatment Process'.
Resolution: course coordinator tabled the newly framed syllabus of certificate course in the meeting' after through discussion it was approved unanimously.

Item No.2: Any other matter with the permission of Chair'
Resolution: Hon'ble Principal directed the Coordinator to enrolled students name for the certificate course after 'Diwali Vacation'.

As there was no other matter to discuss, the meeting was concluded with vote of thanks by the coordinator of the course.

Name

Signature

- 1) Hon'ble Dr. Pravin Charde
- 2) Dr. A. P. Lambat
- 3) Dr. Bharati S. Tapase

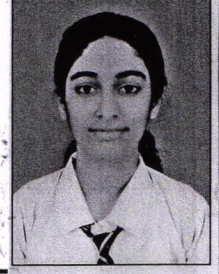


B.S. Tapase

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Place for Higher learning & Research (Research Academy)
Sakkardara Chowk, Umrer Road, Nagpur-440024
Ph. No.- 0712-2705037, 0712-2751344 email- sevamahilamv@gmail.com

To,
The Course Coordinator,
Sevadal Mahila Mahavidyalaya,
Nagpur.



CERTIFICATE COURSE IN SEWAGE TREATMENT PROCESS

(Session: 2023-24)

Name of the Candidate: JAYEE . S. JAIN
Date of Birth: 22.06.2004
Permanent Address: house no. 450. soham kothi mood
near sare guruji school diwan woda
mahal, NAGPUR
Mobile Number: 8329665367
Email: jayeejain7@gmail.com
Faculty: SCIENCE Class: BSC 11nd year
Subjects offered: CHEMISTRY, BOTANY, ENVIRONMENTAL
SCIENCE

Jayee
Signature of Candidate

BG Tapase
Asst. Prof. Dr. Bharati Tapase
Course Coordinator



Nauoble
Prof. Mrs. N.S. Dhoble
Officiating Principal
Sevadal Mahila Mahavidyalaya,
Nagpur

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Ph. No.- 0712-2705037, 0712-2751344 email- sevamahilamv@gmail.com



To,
The Course Coordinator,
Sevadal Mahila Mahavidyalaya,
Nagpur.

CERTIFICATE COURSE IN SEWAGE TREATMENT PROCESS

(Session: 2023-24)

Name of the Candidate: Shivani Shankar Lakade
Date of Birth: 12/10/2004
Permanent Address: Plot No. 20, Vaishnodevi Nagar,
Wathoda Ring Road, Nagpur.
Mobile Number: 8329890851
Email: lakadeshivani84@gmail.com
Faculty: Science Class: B.Sc II year
Subjects offered: Chemistry, Botany, Environmental Science

Shivani

Signature of Candidate

B. Tapase
Asst. Prof. Dr. Bharati Tapase
Course Coordinator



N. Dhoble
Prof. Mrs. N.S. Dhoble
Officiating Principal
Sevadal Mahila Mahavidyalaya,
Nagpur

**CERTIFICATE COURSE
ON
SEWAGE TREATMENT PROCESS**

List of students	EMAIL -ID	Ph. Number
1.Jayee S. Jain	jayeejain7@gmail.com	8329665367
2.Astha V. Puranik	vjpuranik1974@gmail.com	9850354321
3.Tanushree B. Gaymukhe	tanushreegaymukhe@gmail.com	8010470582
4.Shivani S. Lakade	lakadeshivani84@gmail.com	9860107773
5.Triveni N. Moon	trivenimoon6@gmail.com	9834982729
6.Anju S. Gujar	anjugujard@gmail.com	8208527024
7. Tejaswi J. Meshram	meshramtejswi@gmail.com	8010212896
8.Anapurna S. Junghare	anpurnajunghare@gmail.com	9699275361
9.Bhumika N. Dhramgodiya	bhumikadhramgodiya@gmail.com	7276081662
10.Nikita G. Rakhade	nikitarakhade1@gmail.com	9503356591
11.Sana H. Sheikh	sanahamidshaeikh10@gmail.com	7058625963
12.Yogita P.Choudhary	yogitachoudhari062@gmail.com	7058764653
13.Shifa M. Zakir	Shifafatema986047@gmail.com	8600774463
14.Masira S. Ali	Masiraali88@gmail.com	8432899395
15.Mayuri Wasamwar	-	7083637139
16.Akansha V. Funde	-	7767054364

B. Tapase
COURSE COORDINATOR:

Dr.Bharati S. Tapase

Department of Environmental Science.



Sevadal Mahila Mahavidyalaya

Place for Higher Learning & Research (Research Academy)
Sakkaradara Square, Umrer Road, Nagpur-440024

THEORY EXAMINATION OF CERTIFICATE COURSE

SUBJECT -: SEWAGE TREATMENT PROCESS

Department of Environmental Science

SUMMER-2023-24

Time-3 hours

Date -25 April 2024

Total marks -60

All questions are compulsory and carry equal marks. (10 marks for each question)

Q1 .What is sewage? Discuss the sources and effects of sewage on water body?

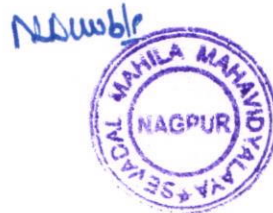
Q2. Discuss the process of Organic content i.e. COD and BOD for sewage estimation.

Q3. Discuss in details about the characteristics of sewage.

Q4. Write on Nitrogen and Phosphate estimation methods.

Q5. Discuss the physical and chemical unit operation used in sewage treatment process.

Q6. Which processes apply for sludge management, discuss it briefly.



Pradipase
25/4/24

Sevadal Mahila Mahavidyalaya

Place for Higher Learning & Research (Research Academy)
Sakkaradara Square, Umrer Road, Nagpur-440024

PRACTICAL EXAMINATION OF CERTIFICATE COURSE

SUBJECT –: SEWAGE TREATMENT PROCESS

Department of Environmental Science

SUMMER-2023-24

Time-3 hours

Date -26 April 2024

Total marks -20

Solve any two practicals from following question. (10 marks each)

- Q.1. Estimation of Nitrogen in a given sewage sample.
- Q.2. Estimation of Total Organic Carbon in provided sewage sample.
- Q. 3. Estimation of Organic Content i.e. COD and BOD in provided sewage sample.
- Q. 4. Determination of Dissolved Oxygen in sewage waste sample.
- Q. 5. Estimation of Turbidity and Acidity of a sewage sample.

External Examiner



Bhambur

Internal Examiner

Sevadal Mahila Mahavidyalaya

Place for Higher Learning & Research (Research Academy)
Sakkaradara Square, Umrer Road, Nagpur-440024

Mark list of Certificate course

SEWAGE TREATMENT PROCESS

Session:2023-2024

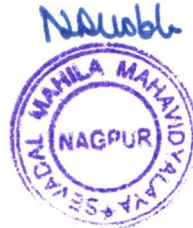
Date: 28-04-2024

Total Marks 100

Sr. No.	Name of Students	Theory Paper-60M	Practical Exam-20 M	Assignment 20 M	Total Marks
1.	Jayee S. Jain	51	17	17	85
2.	Astha V. Puranik	54	18	18	90
3.	Tanushree B. Gaymukhe	54	18	18	90
4.	Shivani S. Lakade	49	16	16	81
5.	Triveni N. Moon	43	15	15	73
6.	Anju S. Gujar	46	16	10	72
7.	Tejaswi J. Meshram	30	10	10	50
8.	Anapurna S. Junghare	39	10	10	59
9.	Bhumika N. Dhramgodiya	42	18	12	72
10.	Nikita G. Rakhade	48	18	18	84
11.	Sana H. Sheikh	42	18	18	78
12.	Yogita P.Choudhary	42	15	15	72
13.	Shifa M. Zakir	25	10	10	45
14.	Masira S. Ali	24	11	10	45
15.	Mayuri Wasamwar	28	9	10	47
16.	Akansha V. Funde	26	9	11	46

B.S. Tapase
Coordinator

Dr. Mrs. B.S. Tapase



N.S. Dhoble
Prof. (Mrs.) N. S. Dhoble
Off. Principal

Sevadal Mahila Mahavidyalaya, Nagpur.



Sevadal Shikshan Sanstha's
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Sevadal Mahila Mahavidyalaya

Place for Higher Learning and Research (Research Academy)
Sakkardara Square, Umrer Road, Nagpur-440024

Certificate of Completion

This certificate is awarded to

Ms. Masira S. Ali

she has successfully completed the Certificate Course in
"*Sewage Treatment Process*",
conducted by the Department of Environmental Science.

Date : 30/04/2024

B. Tapase
Dr. (Mrs.) Bharati S. Tapase
Course Coordinator

N. Dhoble
Prof. (Mrs.) Nirupama S. Dhoble
Off. Principal
Sevadal Mahila Mahavidyalaya, Nagpur

N. Dhoble



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Sakkardara Square, Umrer Road, Nagpur - 440 024

Email : sevamahilamv@gmail.com

Website : www.sevadalmahilamahavidyalaya.ac.in

Certificate Course
in
Herbal Technology

Department of Botany



N. S. W. D. P.

Off. Principal

**Sevadal Mahila Mahavidyalaya
Nagpur.**

PROGRAMME OUTCOME :

Certificate Course on Herbal Technology

The Certificate Course on Herbal Technology was successfully carried out in Department of Botany at Sevadal Mahila Mahavidyalaya Nagpur- 2023-2024 with a batch of 40 students of B.Sc. Final Year (Sem V and VI) out of which 27 students successfully completed the course.

This subject gave students the knowledge of basic understanding of herbal industry, the quality of raw material used, guidelines for quality of herbal drugs, herbal cosmetics, natural sweeteners, nutraceuticals etc.

In the course, teaching methodology used was Classroom teaching, Seminars, Practicals and Proposals. Guest lectures and workshops – were arranged from time to time. Guest lectures were arranged by expertise in subject which enabled the students to gain extra knowledge in respective course.

Workshops were arranged from time to time for students-

- The main purpose of the workshop was to understand the complexity of herbal products and to find out the appropriate and scientific solution for the same.
- The workshop covered practical aspects of herbal products which include preparation of samples, selection of method of analysis, application of proper method of analysis.

After completing this course student were able to-

- CO-1. Develop their understanding on plants and its parts used in Herbal Technology
- CO-2. Define and describe the principle of cultivation of herbal products.
- CO-3. List the major herbs, their botanical name and chemical constituents.
- CO-4. Develop the skills for cultivation of plants and their value added processing / storage / quality control.

N. S. W. H. R.

Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

AIMS & OBJECTIVES :

- To know about the various technologies used in herbal preparations.
- To teach the fundamental of various systems of herbal medicines, understand raw material as source of herbal drugs from cultivation to herbal drug product
- Know the herbal cosmetics, natural sweeteners and nutraceuticals.
- List of herbal plants used for treatment of various types of diseases.
- Besides this students gained knowledge of increase in demand of natural products in international market.
- This subject gave the students the knowledge of basic understanding of herbal drug.



Nauwale
Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

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Email : sevamahilamv@gmail.com

Website : www.sevadalmahilamahavidyalaya.ac.in

Date 28-09-2023

NOTICE

All the members of the department of botany are hereby informed that the meeting regarding the certificate course in '*Herbal Technology*' has been scheduled on 3rd Oct, 2023 at 11.30 am at the Hon'ble Principal's chamber.

Hon'ble Principal Sir will chair the meeting in presence of Asst. Prof. Dr. Ashish P. Lambat, NAAC Coordinator.

Agenda of the meeting:

- 1) To commence the Certificate Course in 'Herbal Technology'.
- 2) To frame the syllabus of the course.
- 3) Any other matter with the permission of the chair.

Raiswal

Asst. Prof. Dr. Mrs. Renu Jaiswal
Course Coordinator
Herbal Technology

Copy to:

Asst. Prof. Dr. Ashish P. Lambat, NAAC Coordinator



NO work

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Website : www.sevadalmahilamahavidyalaya.ac.in

Minutes of the Meeting dated 03.10.2023

Certificate course in 'Herbal Technology'

The meeting regarding the commencement of Certificate Course in '***Herbal Technology***' was held on 3rd Oct, 2023 at 11.30 am at the Hon'ble Principal's chamber. Hon'ble Principal Sir presided over the meeting.

Agenda of the meeting:

- 1) To commence the Certificate Course in '***Herbal Technology***'.
- 2) To frame the syllabus of the course.
- 3) Any other matter with the permission of the chair.

Following Members were present.

- | | |
|--------------------------------------|--------------------|
| 1) Prof. Pravin Charde, Principal | Chairman |
| 2) Asst. Prof. Dr. Ashish P. Lambat | IQAC Coordinator |
| 3) Prof. and Head Dr. V.S. Dongre | Member |
| 4) Asst. Prof. Dr. Mrs. Renu Jaiswal | Course Coordinator |

The Course Coordinator welcomed the Chairman, Hon'ble Principal and other members and called the meeting in order with the permission of chairperson. The coordinator read out the agenda of the meeting and subsequently discussed the matter.

- 1) Item No.1 : To commence the Certificate Course in '***Herbal Technology***'.

Resolution : Unanimously it was decided to commence the Certificate Course in '***Herbal Technology***' in the session 2023-2024.

- 2) Item No.2 : To frame the syllabus of the course.

Resolution : Hon'ble Principal expressed his views regarding the framing of course syllabus and asked to prepare the syllabus of the Certificate Course in '***Herbal Technology***'.



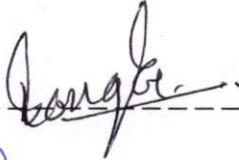

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Handwritten signature
Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

3) Item No. 3 : Any other matter with the permission of the chair.

Resolution : As there was no other matter to discuss, the coordinator summed up the meeting by expressing thanks for everyone's gracious attendance.

<u>Name</u>	<u>Signature</u>
1) Prof. Pravin Charde, Principal	 -----
2) Asst. Prof. Dr. Ashish P. Lambat	 -----
3) Prof. and Head Dr. V.S. Dongre	 -----
4) Asst. Prof. Dr. Mrs. Renu Jaiswal	 -----



N. Jaiswal
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

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Email : sevamahilamv@gmail.com

Website : www.sevadalmahilamahavidyalaya.ac.in

Date 13-10-2023


NOTICE

All the members of the department of botany are hereby informed that the meeting regarding the commencement of certificate course in '**Herbal Technology**' has been scheduled on 18 Oct, 2023 at 11.30 am at the Hon'ble Principal's chamber.

Hon'ble Principal Sir will chair the meeting in presence of Asst. Prof. Dr. Ashish P. Lambat, NAAC Coordinator.

Agenda of the meeting:

- 1) To confirm the minutes of the last meeting.
- 2) To review the progress of framing the syllabus of Herbal Technology.
- 3) Any other matter with the permission of the chair.


Asst. Prof. Dr. Mrs. Renu Jaiswal
Course Coordinator
Herbal Technology

Copy to:

Asst. Prof. Dr. Ashish P. Lambat, NAAC Coordinator




Off. Principal
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Website : www.sevadalimahilamahavidyalaya.ac.in

Minutes of the Meeting dated 18.10.2023

Certificate course in 'Herbal Technology'

The meeting regarding the commencement of Certificate Course in '*Herbal Technology*' was held on 18 Oct, 2023 at 11.30 am at the Hon'ble Principal's chamber. Hon'ble Principal Sir presided over the meeting.

Agenda of the meeting:

- 1) To confirm the minutes of the last meeting.
- 2) To review the progress of framing the syllabus of Herbal Technology.
- 3) Any other matter with the permission of the chair.

Following Members were present.

- | | |
|--------------------------------------|--------------------|
| 1) Prof. Pravin Charde, Principal | Chairman |
| 2) Asst. Prof. Dr. Ashish P. Lambat | IQAC Coordinator |
| 3) Prof. and Head Dr. V.S. Dongre | Member |
| 4) Asst. Prof. Dr. Mrs. Renu Jaiswal | Course Coordinator |

The Course Coordinator welcomed the Chairman, Hon'ble Principal and other members and called the meeting in order with the permission of chairperson .The coordinator read out the agenda of the meeting and subsequently discussed the matter.

1) Item No.1 : To confirm the minutes of the last meeting.

Resolution : The minutes of the last meeting held on 03.10.2023 were read by the course coordinator and subsequently the minutes were unanimously approved.

2)Item No.2 : To review the progress of framing the syllabus of Herbal Technology.

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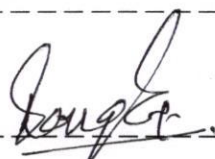
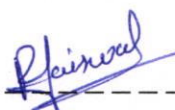
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Resolution: Course coordinator tabled the newly framed syllabus of certificate course in Herbal Technology in the meeting. After thorough discussion it was approved unanimously

3) Item No. 3 : Any other matter with the permission of the chair.

Resolution: Hon'ble Principal directed the Coordinator to start the admissions for the students after Diwali Vacations.

As there was no other matter to discuss, the meeting was concluded with vote of thanks by the coordinator of the course.

<u>Name</u>	<u>Signature</u>
1) Prof. Pravin Charde, Principal	
2) Asst. Prof. Dr. Ashish P. Lambat	
3) Prof. and Head Dr. V.S. Dongre	
4) Asst. Prof. Dr. Mrs. Renu Jaiswal	



N. D. Wale
Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

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Website : www.sevadalmahilamahavidyalaya.ac.in

Date 25-10-2023

NOTICE

All the students are hereby informed that the certificate course in '*Herbal Technology*' run by the department of botany is designed to help students :-

- To know about the various technologies used in herbal preparations.
- To teach the fundamental of various systems of herbal medicines, understand raw material as source of herbal drugs from cultivation to herbal drug product

Students interested to get admitted to the above certificate course should contact following teachers for admission before 30th November, 2023.

- 1) Prof. and Head Dr. V.S. Dongre
- 2) Asst. Prof. Dr. Mrs. Renu Jaiswal



N. S. Chande
Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

(Prof. Pravin Charde)
Principal
Sevalal Mahila Mahavidyalaya,
Nagpur

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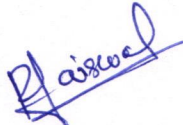
Email : sevamahilamv@gmail.com


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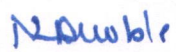
Certificate Course in Herbal Technology

List of Students for Certificate Course B.Sc. Final Yr. (2023-2024)

Sr. No.	Name	Sr. No.	Name
1)	Anamika P Chate	15)	Aishwarya S Gajbhiye
2)	Chetana Jangade	16)	Anisha V Mendhe
3)	Mahek Sheikh	17)	Damini Bhure
4)	Siddhi Hulke	18)	Karishma Dhurve
5)	Sushma Urkude	19)	Khushi Nagpure
6)	Varsha Tonpe	20)	Rupali S Nanwate
7)	Poonam N Thakare	21)	Shaieleja A Taratkar
8)	Prachi Waghmare	22)	Shravani Kambdi
9)	Pratiksha Waghmare	23)	Vishakha Bajanghate
10)	Ritu Ingole	24)	Vibhavari V Padhye
11)	Shalini Sharma	25)	Saniya Patel
12)	Vaishnavi Ingalkar	26)	Sabhiha Quazi
13)	Aasma S. Shakil	27)	Sejal Shinde
14)	Priya Baghel	28)	


(Dr. Mrs. Renu Jaiswal)
Course Coordinator


(Prof. Pravin Charde)
Principal
Sevadal Mahila Mahavidyalaya
Nagpur


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Certificate Course in Herbal Technology
Syllabus

Unit-I

- **Herbal Technology** -History and importance
- **Basic concepts** - Drugs, Cosmetics, Natural dyes, Difference between Organized and Unorganized drugs
- List of **Herbal plants** and their uses.

Unit- II –Herbs as raw material

- **Herbs as raw materials**-Definition of herb, herbal medicine, herbal medicinal product, herbal drug preparation Source of Herbs Selection, identification and authentication of herbal materials processing of herbal raw material.
- **Methods:** Cultivation, Harvesting, Processing, Storage and Utilization of *Withania somnifera*, *Aloe vera*, *Ocimum sanctum* etc.
- **Study of Dye yielding plants:** *Lawsonia alba*(Heena), *Rivinia humulis*, *Indigofera tinctoria* .

Unit III – Herbal Cosmetics

- **Herbal Cosmetics-Sources and description of raw materials** of herbal origin used via, fixed oils, waxes, gums colours , perfumes, protective agents, bleaching agents, antioxidants in products such as skin care, hair care and oral hygiene products.
- **Herbs used in cosmetics**-*Cocos nucifera* (Coconut oil), *Curcuma longa* (Turmeric), etc.....
- **Study of Traditional and modern extraction techniques**



Naumbh
Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

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Unit IV- General Introduction to Herbal Industry

- **Herbal drugs industry:** Present scope and future prospects, brief account of plant based industries and institutions involved in work on medicinal and aromatic plants in India.
- **Study of following herbs as health food:** *Alfa alfa, Chicory, Ginger, Fenugreek, Garlic, Honey, Amla, Gin- seng- Ashwagandha, Spirulina* antibiotic properties etc.

List of Practical

- Extraction and preparation of *Aloe vera* juice from mature leaves of plant.
- To study method of preparations of *Rose water*.
- To study method of preparations of oil from *Hibiscus* flower.
- **Preparation of natural dyes from dye yielding plants:** *Lawsonia alba(Heena), Rivinia humulis, Indigofera tinctoria* etc ...
- **Preparation of Herbarium sheets in a form of Digital Herbarium of Various Herbal /Medicinal plants and their uses**
- **Field Visit to Herbal industry's or any other industries related to Herbal technology**

Renu Jaiswal

(Dr. Mrs. Renu Jaiswal)
Course Coordinator



Nenu Jaiswal

Off. Principal
Sevadai Mahila Mahavidyalaya
Nagpur.



SEVADAL SHIKSHAN SANSTHA'S
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SEVADAL MAHILA MAHAVIDYALAYA
& RESEARCH ACADEMY
Sakkardara Square, Umrer Road, Nagpur-24

Certificate Course in Herbal Technology

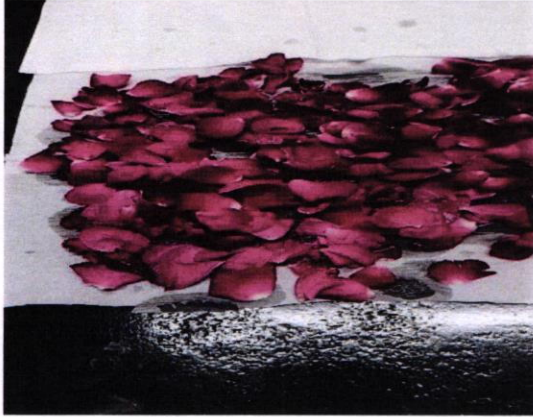
Roll No.	NAME	Attendance for the Month of Jan/Feb/March-24																												
		3/01/24	4/01/24	5/01/24	9/01/24	10/01/24	11/01/24	16/01/24	17/01/24	18/01/24	19/01/24	23/01/24	24/01/24	25/01/24	27/01/24	31/01/24	1/02/24	7/02/24	8/02/24	13/02/24	14/02/24	20/02/24	21/02/24	27/02/24	28/02/24	6/03/24	15/03/24	20/03/24	27/03/24	28/03/24
1)	Anamika. P. Chale	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2)	Chetana Jangale	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3)	Mahek. Sheikh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4)	Siddhi Hulke	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5)	Sushma. Umkote	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6)	Vaishali. Tonke	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7)	Poonam. N. Thakare	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
8)	Prachi. Waghmare	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9)	Pratiksha. Waghmare	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10)	Ritu. Ingole	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11)	Shalini. Sharma	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12)	Vaishnavi. Ingalkar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13)	Arma. S. Shakti	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14)	Priya. Baghel	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15)	Ashwarya. S. Gaibhiye	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16)	Anisha. V. Mendhe	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17)	Damini. Bhure	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
18)	Khushi. Nagpure	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
19)	Karishma. Dhurve	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
20)	Rupali. Nonwate	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21)	Shajaleja. A. Taratkar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
22)	Shravani. Kamble	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
23)	Vishakha. Bajnath	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
24)	Nibharani. V. Padhye	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25)	Saniya. Patel.	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
26)	Sabhiha. Gupte	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
27)	Sejal. Shinde	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P



Principal

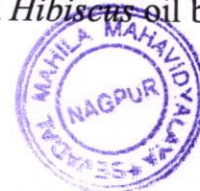
Principal

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Sevadal Mahila Mahavidyalaya
Nagpur.



Preparation of *Rose water*, *Aloe Vera gel* and *Hibiscus oil* by students

Naawble
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Website : www.sevadalmahilamahavidyalaya.ac.in

Date 18-03-2024

NOTICE

All the students of certificate course in '*Herbal Technology*' run by the department of botany are hereby informed that the internal written examination will be held on dt. 08.04.2024 at 10:30AM in the College Conference Hall (Room No.210).

Students are directed to remain present for the same.



(Dr. Mrs. Renu Jaiswal)
Course Coordinator



(Prof. Pravin Charde)
Principal
Sevadal Mahila Mahavidyalaya
Nagpur





Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

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Certificate Course in Herbal Technology

(Botany)

Internal Examination 2023-2024

Time: Two Hours]

[Maximum Marks: 40

N.B:- (1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagrams and examples wherever necessary.

Write on: (Any Four)

(4x10)

- a) Herbal Technology - History and importance
- b) Difference between Organized and Unorganized drugs
- c) List of any 10 Herbal plants and their uses.
- d) Methods: Cultivation, Harvesting, Processing, Storage and Utilization of
Withania somnifera
- e) Dye yielding plants: *Lawsonia alba* (Heena),
- f) Herbal Cosmetics- used in skin care and hair care.
- g) Herbs used in cosmetics-*Cocos nucifera* (Coconut oil)
- h) Herbal drugs industry: Present scope and future prospects plant based industries
- i) Any four herbs used as health food



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Date 22-04-2024

NOTICE

All the members of the department of botany are hereby informed that the meeting regarding the certificate course in '*Herbal Technology*' has been scheduled on 24th April, 2024 at 11.30 am at the Hon'ble Principal's chamber.

Hon'ble Principal Sir will chair the meeting in presence of Asst. Prof. Dr. Ashish P. Lambat, NAAC Coordinator.

Agenda of the meeting:

- 1) To confirm the minutes of the last meeting.
- 2) To review the progress of the Certificate Course in "Herbal Technology".
- 3) Any other matter with the permission of the chair.

Renu Jaiswal

Asst. Prof. Dr. Mrs. Renu Jaiswal
Course Coordinator
Herbal Technology

Copy to:

Asst. Prof. Dr. Ashish P. Lambat, NAAC Coordinator



N. S. Lambat
Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

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Website : www.sevadalmahilamahavidyalaya.ac.in

Minutes of the Meeting dated 24th April, 2024

Certificate course in 'Herbal Technology'

The meeting regarding the Certificate course in '***Herbal Technology***' was held on 24th April, 2024 at 11.30 am at the Hon'ble Principal's chamber. Hon'ble Principal Sir presided over the meeting.

Agenda of the meeting:

- 1) To confirm the minutes of the last meeting.
- 2) To review the progress of the Certificate Course in "Herbal Technology".
- 3) Any other matter with the permission of the chair.

Following Members were present.

- | | |
|--------------------------------------|--------------------|
| 1) Prof. Pravin Charde, Principal | Chairman |
| 2) Asst. Prof. Dr. Ashish P. Lambat | IQAC Coordinator |
| 3) Prof. and Head Dr. V.S. Dongre | Member |
| 4) Asst. Prof. Dr. Mrs. Renu Jaiswal | Course Coordinator |

The Course Coordinator welcomed the Chairman, Hon'ble Principal and other members and called the meeting in order with the permission of chairperson .The coordinator read out the agenda of the meeting and subsequently discussed the matter.

1) Item No.1 : To confirm the minutes of the last meeting.

Resolution : The minutes of the last meeting held on 18.10.2023 were read by the course coordinator and subsequently the minutes were unanimously approved.

2)Item No.2 : To review the progress of Certificate Course in "Herbal Technology"

Cont'd...2




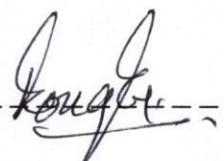
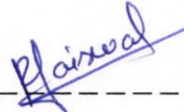
N.S. Walshe
Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.

Resolution : Course coordinator presented the exam result of the Certificate Course in "Herbal Technology". It was approved unanimously

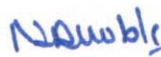
3) Item No. 3 : Any other matter with the permission of the chair.

Resolution : Hon'ble Principal Sir instructed to distribute certificates to the students on the accomplishment of the certificate course.

As there was no other matter to discuss, the meeting was concluded with vote of thanks by the coordinator of the course.

<u>Name</u>	<u>Signature</u>
1) Prof. Pravin Charde, Principal	 -----
2) Asst. Prof. Dr. Ashish P. Lambat	-----
3) Prof. and Head Dr. V.S. Dongre	 -----
4) Asst. Prof. Dr. Mrs. Renu Jaiswal	 -----




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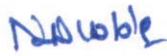
Website : www.sevadalmahilamahavidyalaya.ac.in

Certificate Course in Herbal Technology (Academic Session: 2023-2024)


MARK SHEET

SR. NO.	NAME OF THE STUDENT	MARKS OBTAINED			IN WORDS	GRADE
		Theory (40)	Internal Assessment (60)	Total (100)		
1)	Anamika P Chate	35	54	89	Eighty Nine	A
2)	Chetana Jangade	34	48	82	Eighty Two	A
3)	Mahek Sheikh	34	49	83	Eighty Three	A
4)	Siddhi Hulke	32	50	82	Eighty Two	A
5)	Sushma Urkude	33	46	79	Seventy Nine	A
6)	Varsha Tonpe	30	44	74	Seventy Four	A
7)	Poonam N Thakare	29	50	79	Seventy Nine	A
8)	Prachi Waghmare	30	46	76	Seventy Six	A
9)	Pratiksha Waghmare	29	48	77	Seventy Seven	A
10)	Ritu Ingole	32	42	74	Seventy Four	A
11)	Shalini Sharma	31	46	77	Seventy Seven	A
12)	Vaishnavi Ingalkar	32	44	76	Seventy Six	A
13)	Aasma S. Shakil	34	46	80	Eighty	A
14)	Priya Baghel	36	48	84	Eighty Four	A
15)	Aishwarya S Gajbhiye	31	47	78	Seventy Eight	A
16)	Anisha V Mendhe	32	49	81	Eighty One	A
17)	Damini Bhure	33	50	83	Eighty Three	A
18)	Karishma Dhurve	31	42	73	Seventy Three	A
19)	Khushi Nagpure	32	44	76	Seventy Six	A
20)	Rupali S Nanwate	34	43	77	Seventy Seven	A
21)	Shaieleja A Taratkar	32	46	78	Seventy Eight	A
22)	Shravani Kambdi	34	44	78	Seventy Eight	A
23)	Vishakha Bajanghate	31	42	73	Seventy ThreeA	A
24)	Vibhavari V Padhye	34	44	78	Seventy Eight	A
25)	Saniya Patel	29	42	71	Seventy One	A
26)	Sabhiha Quazi	32	46	78	Seventy Eight	A
27)	Sejal Shinde	34	48	82	Eighty Two	A


(Dr. Mrs. Renu Jaiswal)
Course Coordinator


Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.




(Prof. Pravin Charde)
Principal
Sevadal Mahila Mahavidyalaya, Nagpur



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Certificate Course in Herbal Technology

This certificate is awarded to Ms. Anamika Chate
of Sevadal Mahila Mahavidyalaya, Nagpur for successfully completing
three months' certificate course in "Herbal Technology" during the
session 20 - 20 . She has passed with Grade .

(Dr. Mrs. Renu N. Jaiswal)
Course Coordinator

(Prof. Pravin Charde)
Principal
Sevadal Mahila Mahavidyalaya, Nagpur

Pravin Charde



Pravin Charde
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



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Certificate Course in Herbal Technology

This certificate is awarded to Ms. _____

of *Sevadal Mahila Mahavidyalaya, Nagpur* for successfully completing

three months' certificate course in "Herbal Technology" during the

session 20____ - 20____. She has passed with Grade _____.

(Dr. Mrs. Renu N. Jaiswal)
Course Coordinator

(Prof. Pravin Charde)
Principal
Sevadal Mahila Mahavidyalaya, Nagpur

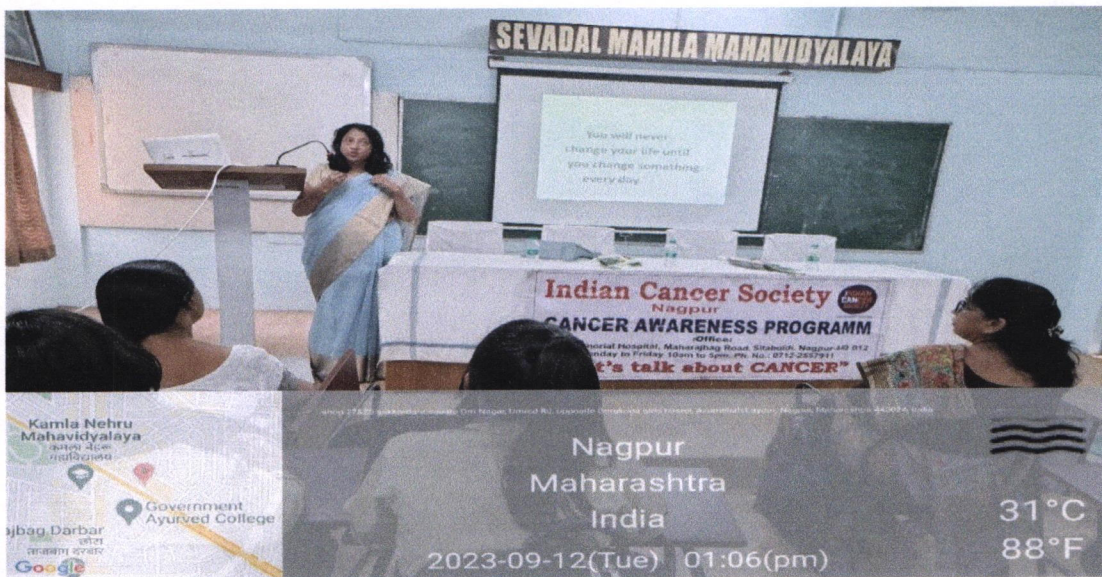


Sevadal Mahila Mahavidyalaya
Nagpur.
Off. Principal

Renu N. Jaiswal

Cancer Awareness Programme

Guest Lecture was organized by the parents teacher association and Alumni association of the college on dated 12/09/2023 on "Health, Hygiene and Cancer Awareness" by Dr Rekha Sapkal Ex Professor and Head, Govt College Akola. She told the students about the precautions to prevent this dreadful disease by modifying lifestyle and avoiding the risk factors. She educated them about the importance of regular screening and checkups. 83 students were present for the lecture.



Dr Rekha Sapkal Delivering her Lecture

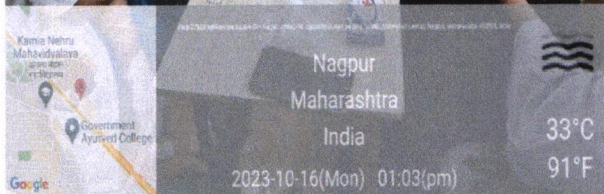


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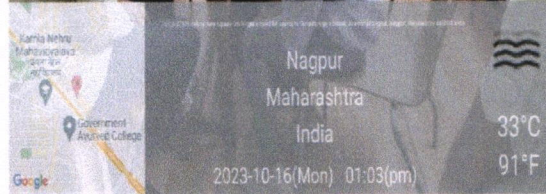
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Sevalal Mahila Mahavidyalaya
Nagpur.

Sickling Screening Camp

A Sickling camp was organised for the students by the Parents Teacher and Alumni association of the college on dated 16/10/2023. This camp was conducted in collaboration with IGGMC Nagpur. This test is very important to diagnose sickle cell anaemia and to identify students with sickle cell trait. The students were informed about the screening results. In all 98 students were screened for this test.



Team of Technicians



Students of PG Faculty undergoing Test



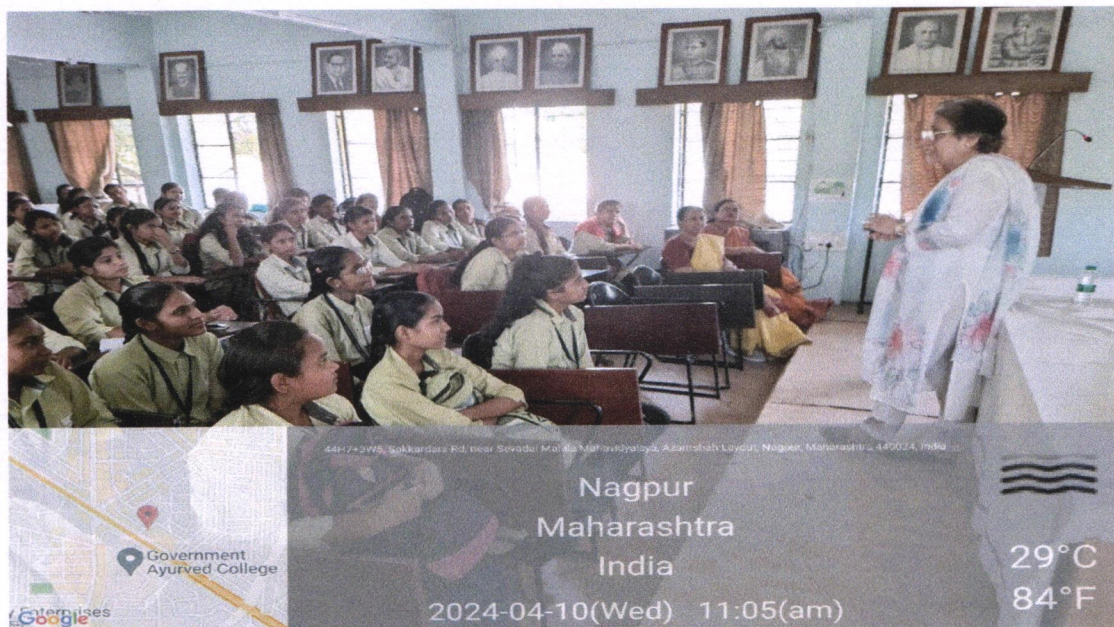
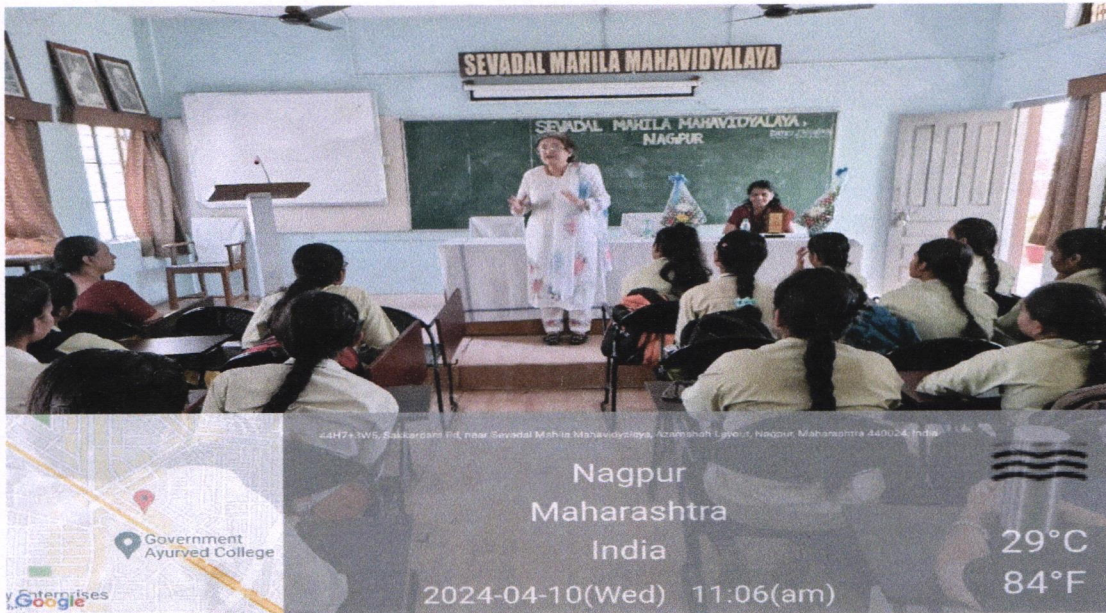
Students of UG Faculty undergoing Test



Neeraj
Off. Principal
Sevalal Mahila Mahavidyalaya
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Guest Lecture on Womens Health

Guest lecture was organized by the parents teacher association and Alumni association of the college on dated 10/04/2024 on the eve of World Health Day on the topic “Women Health Awareness”. The guest speaker was Dr. (Mrs) Anuradha Ridhorkar, a renowned Gynaecologist. She told the students that how women have the fundamental right to live a happy and healthy life free from abuse and discrimination. She informed them about eating disorders, Importance of Exercise, Disadvantages of Mobiles and good Sleeping habits. 40 students were present at the Lecture.



Dr Anuradha Ridhorkar delivering her Lecture



Anuradha

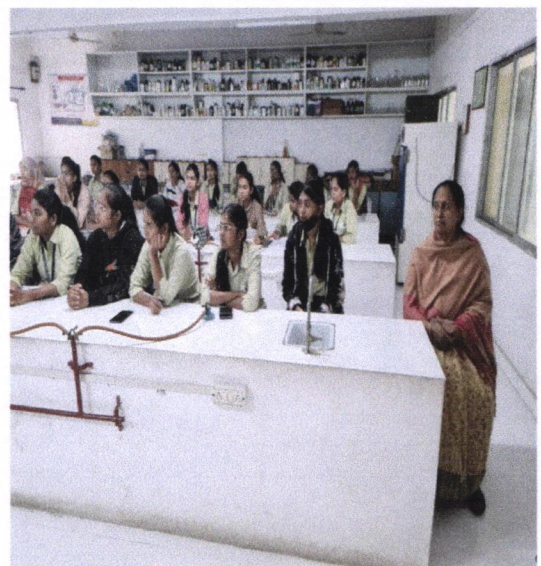
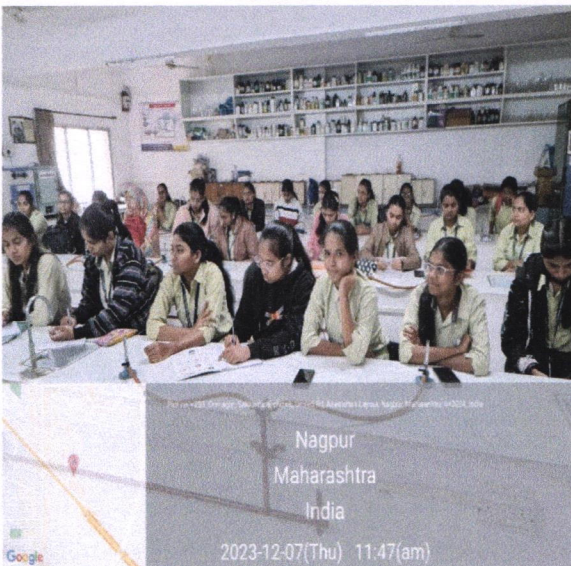
Off. Principal
Sevadal Mahila Mahavidyalaya,
Nagpur.

Guest lecture on Education on AIDS: -

Guest lecture was organized by the parents teacher association and Alumni association of the college on dated 7/12/2023 on the eve of AIDS day. The guest speaker was Dr (Mrs) Seema R Nimbarte, Assistant Professor, Microbiology Department. She told the students about HIV, How it is transmitted and how it can be prevented. This lecture was of great importance so that the students can take care of their own health and health of others. 21 students were present.



Dr Seema Nimbarte delivering her Guest Lecture



Staff And Students at the Guest Lecture



Handwritten signature
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

Sevalal Mahila Mahavidyalaya, Nagpur
Annual Report Co-Curricular and Cultural Committee
Session: 2023-2024

Education is not just confined to imparting academic knowledge to the student. However, it is more about holistic development. The educational institutes can mold the students holistically by exposing them to an array of activities along with the academics. Co-curricular and Cultural committee of the college aims at the overall development of the students. By organizing various co-curricular and Cultural events as well as competitions, a platform is provided to the young and aspiring minds to hone their talent and improve their skills. National/International Days, Birth Anniversaries of great leaders, social activist is celebrated to inculcate our values as well as various competitions were organized.

Details of the activities are as follows:

1) 21st June 2023: International Yoga Day: -

International Yoga Day is celebrated annually on June 21. It is a day dedicated to raising awareness about the numerous benefits of practicing yoga and promoting its holistic approach to health and well-being. **Yoga** is an ancient practice that originated in India and has gained worldwide popularity for its physical, mental and spiritual benefits. The theme for **International Yoga Day 2023** is determined by the United Nations, which officially recognised this observance in 2014. Each year, the theme focuses on a specific aspect of yoga that highlights its relevance and impact on society. "Yoga for Vasudhaiva Kutumbakam" was the theme for this year's International Yoga Day 2023 which beautifully captures our shared aspiration for "One Earth, One Family, and One Future."

This year too, Sevalal Education Society's Sevalal Mahila Mahavidyalaya, Nagpur celebrated the International Yoga Day on 21st June, 2022 at 9.00 a.m. The National Service Scheme unit, Cultural and Co-curricular Committee and the Department of Physical Education of the college organised the yoga session on this occasion. Ms. Divyani Donge, the Yoga trainer, Nagpur provided valuable information on the history of Yoga and its importance in everyone's life. She also provided valuable information about various asanas and demonstrated the yogasanas for healthy and peaceful life. The teaching, non-teaching staff members, NSS volunteers and the students of the college participated in this Yoga session.

M. K. W. B. K.
Off. Principal
Sevalal Mahila Mahavidyalaya
Nagpur.





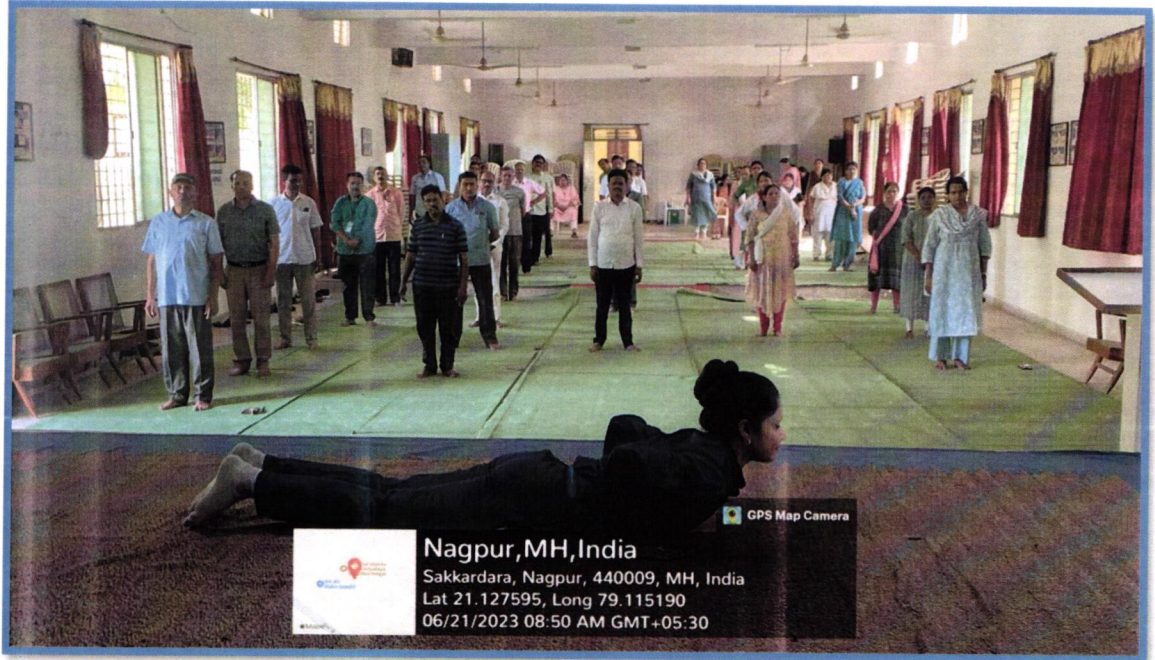
Prof. Pravin Charde, Hon'ble Principal of the college felicitating Ms. Divyani Donge



International Yoga Day Programme

Pravin Charde
 Df. Principal
 Sevadal Mahila Mahavidyalaya
 Nagpur.





Yoga Trainers demonstrating Aasanas in International Yoga Day programme

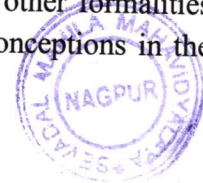


Participants during International Yoga Day Programme

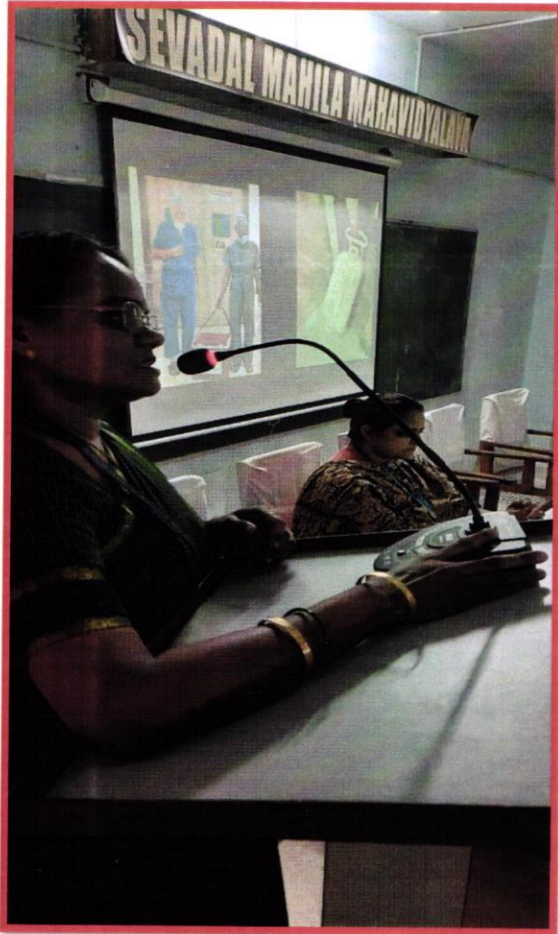
2) 13th August 2023: World Organ Donation'Day

On the occasion of Organ donation day, a guest lecture of Smt. Shalini Patil, coordinator, Organ donation Unit, Kingsway Hospital, Nagpur. This lecture was an attempt to create awareness about the organ donation and clear the misconceptions in the society. Smt. Patil is working as a coordinator since last 9 years and had successfully convinced many relatives to donate the organs as well as body. Dr. Sushil Meshram sir, Head department of Marathi, introduced the speaker. Smt. Patil madam explained the concept of organ donation and other details with the PowerPoint presentation. She explained the procedure and other formalities that has to be done for the organ donation. She also talked about the misconceptions in the

Dr. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.



society about the organ and body donation. Lecture was very beneficial for the students. Students were given the opportunity to ask their queries. Students asked various questions and showed their willingness to enroll themselves for organ donation.



Staff members and Students attending the awareness lecture on Organ Donation Day

N. Kusale
Off. Principal
Sevadal Mahila Mahavidyalaya
Nagpur.

