



Shri Shivaji Education Society, Amravati's
Shri Shivaji Science & Arts College
Chikhli, Dist. Buldana



NAAC Reaccredited with B++ Grade (CGPA-2.82)

We Educate, Inspire and Empower

Department of Chemistry

Cordially invite you to join

ONLINE 6 DAYS CERTIFICATE COURSE

On

Soil and Water Analysis

16 September – 21 September 2021

Time: 12.00 to 5.00 PM

CHIEF ORGANIZER



Dr. Omraj S. Deshmukh
Principal



Prof. S. L. Kumbhare
Head
Department of Chemistry



Mr. S. V. Dautpure
Course Co-ordinator

About Institution

The college is established in 1967 . Dr. Panjabrao Deshmukh & Dalitmitra Pandharinath Patil come together under the banner of Shri Shivaji Education Society, Amravati. It has upgraded itself with introduction of Arts and Commerce stream at UG & PG level. The research programs Ph.D. are added in Science, Arts & Commerce. Other than research facility YCMOU centre, NCC & NSS Units are also available. Also new subject Home Economics is added at degree level. UGC Sponsored career Oriented Program & NSQF courses are key courses running to develop skill in students.

Objective of the course

1. To develop basic understanding regarding soil testing in the students.
2. To introduce them with macro and micro nutrients for soil.
3. To enhance their skills about water analysis.

Learning Outcome

As a result of participating in the certificate course on “soil and water analysis” students as well as farmers will be able to learn and understands how to test soil and water sample an get the knowledge to determine various parameters including pH, alkalinity etc.

Theory Syllabus

Module I

Importance of soil testing and analysis, Sample Collection and processing, selection of field, Method of soil sample collection and processing, Precautions during soil collection and processing. Preservation labeling and Storage of soil sample.

Module II

Brief study of instruments: pH meter, Conductivity meter, UV- Spectrophotometer, Use of soil testing kit and mobile soil testing van (Calibration, instrumentation, applications only).

Module III

Importance of water testing and analysis, sources of water, Reason for depletion of underground water, rain water harvesting, hard and soft water, Hardness of water, carbonate and non carbonate hardness.

Module IV

Methods of expressing hardness, Estimation of total hardness of water by EDTA method involving total carbonate and non-carbonate hardness, Softening of water.

Module V

Ion exchange method and reverse osmosis method, Purification (Sedimentation, Filtration and Sterilization) , Disadvantages of using hard water in boiler.

Practical Syllabus

Part-I: Soil Analysis

1. Determination of pH of soil sample using pH meter.
2. Determination of electrical conductivity of soil sample,
3. Determination of nutrient content (NPK) of soil sample.
4. Determination of salinity of soil sample.
5. Determination of micronutrients of soil sample.

Part-I: Water Analysis

1. Determination of total hardness of water sample.
2. Determination of pH of water sample using pH meter.
3. Determination of alkalinity of water sample.
4. Determination of electrical conductivity of water sample.
5. Determination of COD & BOD of water sample.

Course Structure

Course Name:- Soil and Water Analysis

Number of Modules: 05

Number of Theory (Hours) : 10

Number of Practical (Hours) : 20

Examination Scheme

Internal Marks : 20

Theory Marks : 40

Practical Marks : 40

Total Marks : 100

Eligibility : XII science/any graduate and post graduate students as well as interested farmers can apply for a certificate course.

Course Fee : Not Applicable.

Important Instruction's

- Registration is mandatory for enroll for this course.
- Lectures will be conducted on zoom /google meet platform.
- For the successful completion course it is mandatory for each participant to submit assignments on Google Classroom.
- At the end of course exam will be conducted. Each participant should score a minimum of 40% in total to avail course completion certificate.
- Registration link: <https://forms.gle/EdthxfmEJz9xsTnz7>
- WhatsApp group link: <https://chat.whatsapp.com/G2hPf7unuO53ORVcxIm6xm>.

Online 6 Days Certificate Course on Soil and Water Analysis-2021

List of Participants

Sr. No.	Timestamp	Username	Name of participant
1	10-09-2021 11:58	abhaynikhadelonar@gmail.com	Abhay kailas Nikhade
2	10-09-2021 11:59	meghamangulkar02@gmail.com	Megha vishnu mangulkar
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4	10-09-2021 12:02	gayatri020103@gmail.com	Gayatri Narayan Deshmukh
5	10-09-2021 12:16	gaikwadgopal845@gmail.com	Gopal Vijay Gaikwad
6	10-09-2021 12:18	shubhchinchole14@gmail.com	Shubham chinchole
7	10-09-2021 12:28	rahulparaskar2001@gmail.com	Rahul Dipak Paraskar
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40	10-09-2021 19:59	ashvinip0809@gmail.com	Ashwini Parasram Gaikwad
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60	14-09-2021 21:54	renukayendole18@gmail.com	Ku.Renuka Dagdu Yendole.
61	15-09-2021 10:46	dandevishakha168@gmail.com	Vishakha Pramod Dande
62	16-09-2021 10:06	gaytrihoge111@gmail.com	Gayatri Raju Hoge.
63	16-09-2021 12:13	gayatridande2002@gmail.com	Gayatri Gajanan Dande
64	16-09-2021 13:05	komallambe123@gmail.com	Komal tryambakeshwar lambe
65	16-09-2021 14:20	misalp579@gmail.com	Priyanka Ramdas Misal
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SHRI. SHIVAJI SCIENCE AND ARTS COLLEGE

Chikhli, Dist-Buldana. (Maharashtra)

Department of Chemistry

Soil and Water Analysis Online Certificate Course Schedule-2021

Date	Time	Resource Person/Expert	Topic	Theory(Hrs)	Practical(Hrs)
	11:00-12:00	Prof.S.L.Kumbhare	Brief Introduction about course	1	
16/9/2021	12:00-1:00 pm	Prof.S.S.Kale	Module-III	1	
THURSDAY	1:00-2:00 pm	Prof.T.S.Shrirame	Module-IV	1	
	2:00 -3:00 pm	LUNCH BREAK			
	3:00 - 5:00 pm	Dr.S.R.Patil	Determination of Total hardness of water sample		2
17/9/2021	11:30-12:30 pm	Prof.S.S.Kale	Module-III	1	
FRIDAY	12:30-2:30 pm	Prof.T.S.Shrirame	Detmination of Salinity of soil sample		2
	2:30 -3:00 pm	LUNCH BREAK			
	3:00 - 5:00 pm	Dr.S.R.Patil	Determination of Micronutrients content of soil sample		2
18/9/2021	11:30-12:30 pm	Prof.T.S.Shrirame	Module-IV	1	
SATURDAY	12:30-2:30 pm	Prof.S.L.Kumbhare	Determination of electrical conductivity of soil sample		2
	2:30 -3:00 pm	LUNCH BREAK			
	3:00 - 5:00 pm	Prof.S.S.Kale	Detmination of PH of water sample using PH meter		2
19/9/2021	12:00-1:00 pm	Dr.G.D.Thorat	Module-I	1	
SUNDAY	1:00-3:00 pm	Prof.S.V.Dautpure	Determination of COD and BOD of Water Sample		2
	3:00-3:30 pm	LUNCH BREAK			
	3:30 - 5:30 pm	Prof.S.S.Kale	Detmination of alkalinity of water sample		2
20/9/2021	12:00-1:00 pm	Prof.S.L.Kumbhare	Module-II	1	
MONDAY	1:00-2:00 pm	Dr.S.R.Patil	module-V	1	
	2:00-3:00 pm	Dr.G.D.Thorat	Module -I	1	
	2:30 -3:00 pm	LUNCH BREAK			
	3:30 - 5:30 pm	Prof.S.S.Kale	Detmination of electrical conductivity of water sample		2
21/9/2021	11:30-12:30 pm	Dr.R.B.Gade	Module-V Soil Analysis	1	
TUESDAY	12:30-2:30 pm	Prof.T.S.Shrirame	Determination of nutrient content(NPK) of soil sample		2
	2:30 -3:00 pm	LUNCH BREAK			
	3:00 - 5:00 pm	Prof.S.L.Kumbhare	Detmination of PH of Soil Sample by using PH Meter		2
	5:00 PM	Valedictory Function and Certificate Distribution			
			Total-30 Hrs.	10	20

Course Co-ordinator
Prof.S.V.Dautpure

HOD
Prof.S.L.Kumbhare

Principal
Dr.O.S.Deshmukh

Feedback on online certificate course on Soil and Water Analysis

Thank you for participating in our event. We hope you had enjoyed all the session with full of knowledge.

We want to hear your feedback so we can keep improving our logistics and content. Please fill this quick survey and let us know your thoughts (your answers will be anonymous).

***Required**

1. Email *

2. Full Name (as required on certificate) *

3. Name of Institute/Organization/place *

4. Select the correct option *

Mark only one oval.

☐ Student

☐ Farmer

☐ Other

5. How relevant and helpful do you think it was for you? *

Mark only one oval.

	1	2	3	4	5	
Not very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very much

6. How satisfied were you with the session content? *

Both presented and pre-read material

Mark only one oval.

	1	2	3	4	5	
Poor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Excellent

7. Overall feedback for the course?

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Google Forms

SHRI SHIVAJI SCIENCE & ARTS COLLEGE, CHIKHLI

Department of Chemistry

Report of Activity

Online Certificate Course (Value Added Course) on Soil and Water Analysis

Duration : 16/09/21 to 21/9/21

Time : 12.00 to 5.00 P.M.

Activity : Online Certificate Course (Value Added Course) on Soil and Water Analysis

Aim : To aware the importance of Water and Soil analysis and train the students for analysis of different parameter of Water and Soil sample.

Notice : Leaflet and Schedule of Certificate course is attached with this Report.

Organizer : Dr. O.S. Deshmukh

Name of Convener : Prof. S. L. Kumbhare

Name of organizing Secretary : Prof. S.V. Dautpure

Organizing Committee : Dr. S. R. Patil

Dr. G. D. Thorat

Mr. S.S. Kale

Ms. T.S. Shrirame

Number of Registered Students for Course - 80

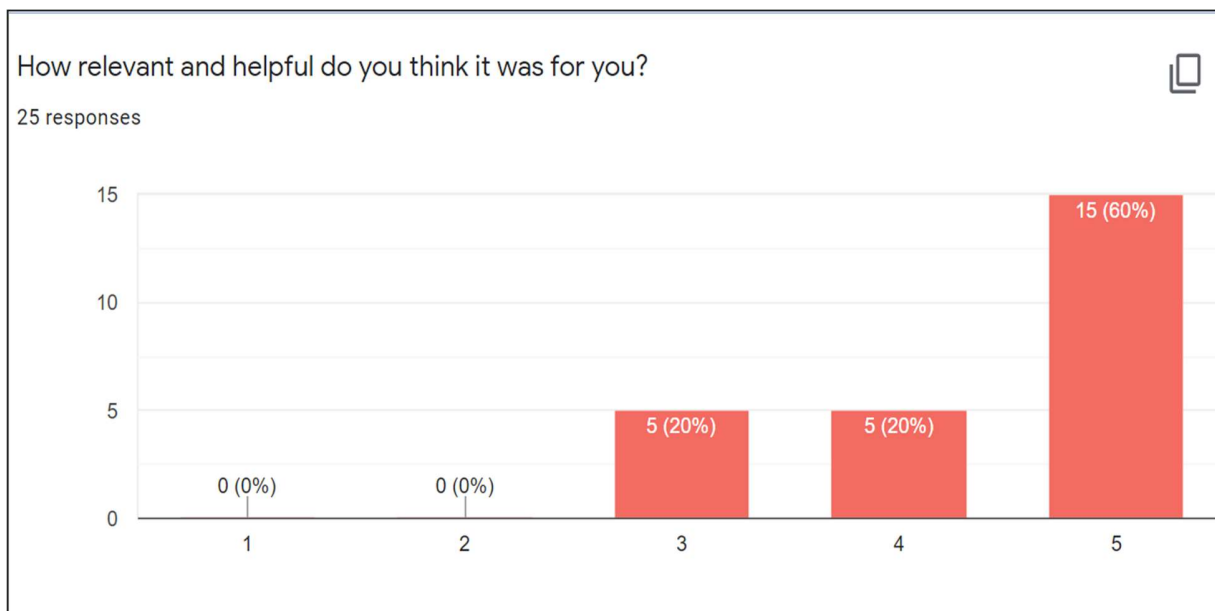
Activity Taken: Department of Chemistry, Shri Shivaji Science & Arts College Chikhli, organized **Online Certificate Course (Value Added Course) on Soil and Water Analysis** during duration **16/9/21 to 21/9/21**. We have prepared syllabus of Theory and Practical. We also prepared schedule of 30 Hours for conducting Theory and Practical. As per Schedule of Certificate course, Certificate Course started on 16/9/21 on 11.00 A.M. with Brief introductory Speech of Prof. S.L. Kumbhare, Head

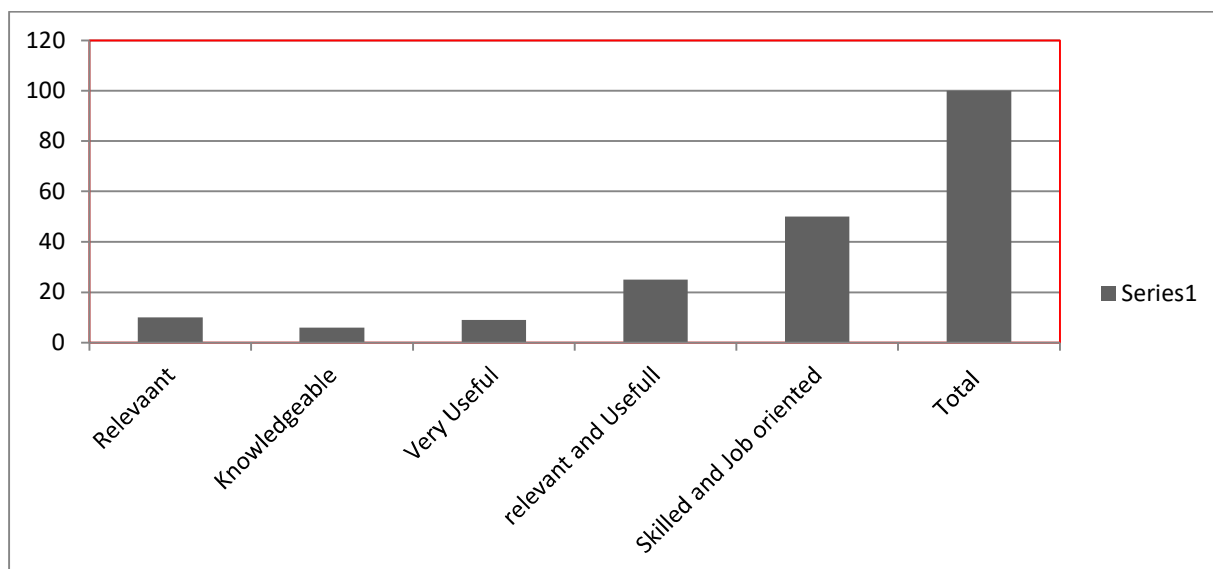
of Department. Detailed related to conduction of Certificate course, Schedule, Time table, Examination pattern, Passing Criteria explained by Prof. S.V. Dautpure. Then on 12.00 P.M. classes of Certificate course started. According to Schedule on each day 6 Hours workload is allotted to carry out Theory and Practical sessions. The course ended on 21/9/21 by completion of 30 Hours session. After Completion of Course, Examination of 100 Marks containing Theory, Practical and Assignment base conducted on 27/9/21 on online mode. On the basis of evaluation, students who have passed examination and filled Feedback form allotted e- Certificate.

FEEDBACK ANALYSIS

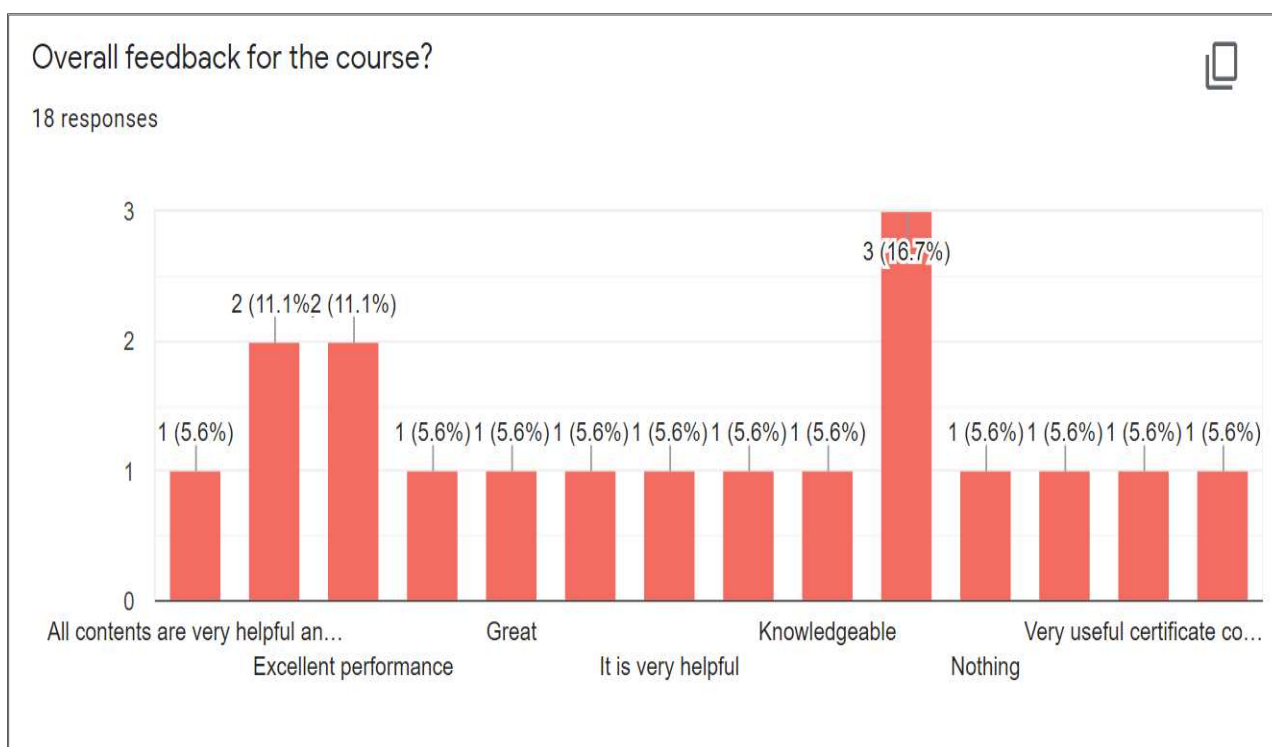
After completion of value added course feedback from all participant was collected through Google form. After the analysis of feedback form following observations were noted prominently

❖ Relevance and usefulness of Course on Five point Scale:





❖ Overall feedback about the Course



❖ **Suggestions, comments and Action taken :**

Sr.No	Suggestions/Comments	Action Taken
1	Oral Demonstration Conducted during practical Course	Due to covid-19 pandemic situation this course was conducted online otherwise we have planned to run hand on practical for sample testing.
2	Limited instruments for Soil and Water Testing	There is provision for using outside instrument with help of private NGOs and Government Agricultural departments.
3	Limited provision for testing of soil and water sample and training for outside candidates	Our institution will have a MoU with other agricultural and Government organization to solve this testing and training problem.



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