# Department of Biotechnology 

Presents

## Certificate Course in Environmental Analysis

## Academic Year: 2022-23

## Sonopant Dandekar Arts, V. S. Apte Commerce and M. H. Mehta Science College, Palghar Department of Biotechnology Certificate Course Environmental Analysis

Objectives:

1. To create awareness about a clean environment.
2. To inculcate scientific temperament among the students to understand environmental and agricultural issues.
3. Train the student to determine the quality of soil and water.
4. To create awareness about soil and wastewater treatment processes.

Learning Outcomes: Upon completion of this course, students will be able to:

1. Understand the impact of environmental pollution on agriculture.
2. Determine physical and chemical properties of soil and water.
3. Handle basic instruments and chemical reagents used in the soil and water testing laboratory.
4. Perform various tests for analysis of soil and water.
5. Understand how to improve the quality of soil and water by using suitable treatment methods.

Duration: - 50 Hrs.
Fees: - Rs. 500/-
Intake Capacity: 40 students
Total Marks: 100 [50 Marks Theory Exam and 50 Marks Practical Exam] Eligibility: - FY / SY/ TY students interested in Environmental awareness and analysis and can be of any stream.

Certificate Course Syllabus and Expert Committee:

| Sr. <br> No. | Name | Designation |
| :---: | :--- | :--- |
| 1. | Dr. Kiran J. Save | Principal, Sonopant Dandekar College, <br> Palghar |
| 2. | Dr. Shilpa M. Gharat | Course Coordinator, Assistant Professor <br> and Head, Dept. of Biotechnology |
| 3. | Prof. Mahesh Deshmukh | IQAC coordinator, Sonopant Dandekar <br> College, Palghar |
| 4. | Dr. Hemant Pednekar | Associate Professor, <br> Ex. Principal Sonopant Dandekar <br> College, Palghar and Head Dept. of <br> Geography, |


| 5. | Dr. Pankaj Goghri | I/C Principal, <br> Professor and Head, Dept. of Botany, N.B. <br> MEHTA SCIENCE COLLEGE, BORDI |
| :---: | :--- | :--- |
| 6. | Mr. Anil More | Agriculture assistant, Taluka agriculture <br> office, Palghar, <br> Agriculture research centre campus( walan <br> naka), Mahim road, Palghar west |
| 7. | Mr. Suraj Gharat | Agriculture assistant, Taluka agriculture <br> office, Palghar, Agriculture research centre <br> campus( walan naka), Mahim road, Palghar <br> west |
| 8. | Asst. Prof. Mamta <br> Tendulkar | Asst. Professor, K. J. Somaiya college. |

## List of subject teachers / Expertise faculty

| Sr. <br> No. | Name |  |
| :--- | :--- | :--- |
| 1. | Dr. Kiran J. Save | Principal, Sonopant Dandekar College, <br> Palghar |
| 2. | Dr. Shilpa M. Gharat | Course Coordinator, Assistant Professor <br> and Head, Dept. of Biotechnology |
| 3. | Dr. Hemant Pednekar | Expert in environmental awareness <br> Ex. Principal and Head Dept. Geography, <br> Sonopant Dandekar College, Palghar |
| 4. | Dr. Pankaj Ghogri | Expert in environmental analysis <br> Associate Professor and Head, Dept. of <br> Botany, N.B. MEHTA SCIENCE COLLEGE, <br> BORDI - 401 701 |
| 5. | Shailaja Palan | Expert in environmental studies, Asst. <br> professor, Sonopant Dandekar College, Palghar |

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## Proposal

## From:- Shilpa M. Gharat

Head of Dept. of Biotechnology, Sonopant Dandekar College, Palghar
Date: 01/09/22

To,
The Principal,
S.D.S.M. College,

Palghar.

Subject: Permission to increase the fees for certificate course in Environmental analysis from Rs. 300/- to Rs. 500/.

## Respected Sir,

As per our oral conversation we are increasing the fees for certificate course in Environmental analysis from Rs. 300/- to Rs. 500/.
Please permit us for the same.
Thanking you,

Yours Sincerely,

Dilpe.b
Dr. Shilpa Gharat,


Principal
Sonopant Dandekar Arts College
V. S. Apte Commerce College \&
M. H. Mehta Science College,

PALGHAR (W.R.)
Bist. Palghar, Pin 401404.

## NOTICE

## DEPARTMENT OF BIOTECHNOLOGY

## CERTIFICATE COURSE IN ENVIRONMENTAL ANALYSIS

All the students of senior college (Arts, Commerce, Science and Management) are hereby informed that Department of Biotechnology is organizing a Certificate Course on Environmental Analysis for all the environment enthusiasts to embrace, learn analytical skills to measure environmental factors and develop entrepreneurial skills in order to benefit in improving the agricultural resources in agricultural vicinity like Palghar.

Enrolment for the above course should be done on or before $15^{\text {th }}$ September, 2022 the google link provided below.

Towards the payment of the course fee Rs. 500/- a payment link will be provided after the completion of registration process.

After successful completion of the course, participants will receive the Certificate from college.
Google form link for registration:
https://docs.google.com/forms/d/e/1FAlpQLSfW30z7wW9q6mfpC2P3DRIyxLYUkA4aFmNTZOYvxbtlvvKPRQ /viewform


Dr. Shilpa Gharat
Head \& Course Coordinator
Department of Biotechnology


Prof. Mahesh Deshmukh
IQAC Coordinator


Dr. Kiran Save

## Brochure

SONOPANT DANDEKAR SHIKSHAN MANDALI'S Sonopant Dandekar Arts, V. S. Apte Commerce and M. H. Mehta Science College, Palghar

## Certificate Course in Environmental Analysis

## Organized by Shri Dahyabhai Amritlal Shah Institute of Biotechnology



1401 $<=$


Contact : $9825367380 / 9833825453 / 7757846383 / 8446209150$

## AIMS AND BENEFITS

This Course will give valuable guidance to the students in acquiring knowledge of environmental factors, governance skills and their understanding of the environmental analysis.

Course Duration-50 Hours.
Fees: - Rs. 500/-
Intake Capacity: $\mathbf{4 0}$ students Eligibility: - FY / SY/ TY students from all streams


## HIGHLIGHTS OF THE COURSE

1. App based learning about the environmental factors.
2. Learn suitability of soil and water for agriculture.
3. Become an Agronomist Career opportunities as an environmentalist.
4. Learn to enhance traditional farming methods to improve overall profit.
5. Learn Physical and Chemical properties of components of soil and water.
6. Learn Soil and water testingsampling methods and analysis of samples.
7. Gain hands-on knowledge about supplementing organic farming.
8. Discover ways in which you can help your local farmers

## REGISTRATION LINK

https://docs.google.com/forms/d/e/1FAlpQ LSfW30z7wW9q6mfpC2P3DRIyxLYUkA4aE mNTZOYvxbtlvyKPRQ/viewform

# Organized by Shri Dahyabhai Amritlal Shah Institute of Biotechnology 



391


Contact : 9825367380/9833825453/7757846383/8446209150
उदिध
ह्या अभ्यासक्रमामुळे विद्याथ्याना
आपल्या पर्यावरणाला समजून
घेणयाचे, पर्यावरणातील विविध
घटकांचे विश्लेषण करणे आणि
विश्लेषणाचे महत्व समजून घेण्यासाठी
मोलाचं मार्गदर्शन मिळेल.

कोर्स कालावधी - ०३ महिने शुल्क - 500/- मात्र क्षमता : 40 विद्यार्थी
पात्रता: - FY / SY / TY / PG सर्व शाखेतील विद्यार्थी


## ठळक वैशिष्टे

1. ऑप आधारित पर्यावरण घटकांचा अभ्यास.
2. शेतीसाठी कोणती माती आणि पाणी योग्य आहे ह्यांबद्दल मार्गदर्शन.
3. तुमच्या आजूबाजूच्या परिसरातील शेतीविषयक घटक सुधारण्यासाठी योग्य ते मार्गदर्शन.
4. प्रात्यक्षिकाद्वारे सेंद्रिय शेतीसाठी योग्य आणि पूरक मार्गदर्शन मिळेल.
5. स्थानिक शेतकच्यांना आर्थिक दृष्ट्या सक्षम करणयासाठी तुम्ही योग्य मार्गदर्शन करू शकता.

REGISTRATION LINK
https://docs.google.com/forms/d/e/1FAlpQ LSfW30z7wW9q6mfipC2P3DRIyxLYUkA4aF mNTZOYvxbtlyvKPRQ/viewform

Soil \& Water Analysis Syllabus

| Units | Particulars | Number of Lectures | Total Lectures |
| :---: | :---: | :---: | :---: |
| Unit I | Introduction |  |  |
| 1.1 | Environmental Pollution Types of pollution \& pollutants | 01 | 08 |
| 1.2 | Soil and water as a natural resource and their importance in Agriculture | 02 |  |
| 1.3 | Soil and water pollution caused by Agricultural waste and Agricultural chemicals | 01 |  |
| 1.4 | Objectives of soil and water analysis and Introduction to basic instruments ( pH meter, digital balance, conductivity meter, colorimeter) and chemical reagents used in the soil and water testing Laboratory. | 04 |  |
| Unit II | Soil |  |  |
| 2.1 | Soil - Physical and Chemical properties of soil and components of soil. | 02 | 09 |
| 2.2 | Problematic soils- Acidic soils, Alkaline soils, Saline soils. How they affect Agriculture and aqua farming | 02 |  |
| 2.3 | Soil treatment | 03 |  |
| 2.4 | Soil testing- sampling methods and analysis of samples. | 02 |  |
| Unit III | Water |  |  |
| 3.1 | Water- Physical and chemical properties of water, Water quality parameters | 01 | 08 |


| 3.2 | Effect of hard water, saline water, <br> polluted water on <br> agriculture | 01 |  |
| :--- | :--- | :--- | :--- |
| 3.3 | Overview of wastewater <br> treatment process | 03 |  |
| 3.4 | water testing- sampling <br> methods and analysis of <br> sample practicals | 03 |  |


|  | Practical l-Soil analysis |  |
| :---: | :---: | :---: |
| 4.1 | Determination of pH , Electrical Conductivity and Moisture content of Soil Sample. | 12 |
| 4.2 | Determination of available Nitrate from Soil Sample. |  |
| 4.3 | App based analysis of soil. |  |
| 4.4 | Determination of available Phosphate from soil sample. |  |
| 4.5 | Determination of Organic Carbon from soil sample |  |
|  | Practical II- Water analysis |  |
| 5.1 | Determination of pH and Electrical Conductivity of water sample | 13 |
| 5.2 | Determination of Total Alkalinity and Total Acidity of Water sample |  |
| 5.3 | Determination of total hardness and salinity of the water sample |  |
| 5.4 | Determination of Dissolved oxygen of water sample |  |
| 5.5 | Determination of TS, TSS, TDS of water sample |  |

# Sonopant Dandekar Arts, V. S. Apte Commerce \& M. H. Mehta Science College, Palghar 

(Best College - University of Mumbai)
(Amongst Top 100 Colleges in India by 'India Today - MDRA Survey 2019')

## Department of Biotechnology

$26^{\text {th }}$ September, 2022

## NOTICE - TIME TABLE

We are delighted to inform all registered participants that the Certificate course in Environmental Analysis will commence in the month of $4^{\text {th }}$ October, 2022. The detailed lecture schedule is provided below for your convenience. Please make a note of it to ensure you don't miss any sessions:

| Day | Time | Venue | Name of the Faculty <br> Member |
| :---: | :---: | :---: | :---: |
| Monday | 08:00 am to 09:00 am | Biotechnology Lab 1 | Dr. Shilpa Gharat |
| Tuesday | 08:00 am to 09:00 am | Biotechnology Lab 1 | Dr. Shailaja Palan |
| Wednesday | 08:00 am to 09:00 am | Biotechnology Lab 1 | Asst. Prof. Runali Raut |
| Thursday | $08: 00$ am to 09:00 am | Biotechnology Lab 1 | Asst. Prof. Apurva Save |
| Friday | 08:00 am to 09:00 am | Biotechnology Lab 1 | Asst. Prof. Ishwari Mehta |

Kindly make a note of the schedule and remain present in the laboratory 15 minutes before the schedule time.

Head \& Course Coordinator



Principal PFUNCIPAL
Sosopant Dandekar Arts College, V.S. Apte Commerce College \& M.H. Mehta Science Coffege PALGHAR (W.R.) Dist. Palghar, Pin-401404

## Student enrollment List

FEES DETAILS EVS COURSE 2022-23

\begin{tabular}{|c|c|c|c|c|c|c|}
\hline Sr.No \& Names \& Class \& College \& Year \& \& <br>
\hline 1 \& Prabodhini Kamble \& prabodhini98@gmail .com \& Sonopant dandekar college \& Second Year \& Biotechnol ogy \& Fees

aid <br>

\hline 2 \& Prajwali Pramod Bhoir \& bhoirprajwali32@gm ail.com \& SDSM college \& | Second |
| :--- |
| Year | \& | ogy | Pa |
| :--- | :--- |
| MSc | Pa | \& aid <br>


\hline 3 \& Sonelal Prajapati \& sonuprajapati3552@ gmail.com \& Sdsm college \& Second Year \& | MSc | Paid |
| :--- | :--- | \& aid <br>

\hline 4 \& Arun M Nair \& $$
\begin{aligned}
& \text { amn20400@gmail.c } \\
& \mathrm{om}
\end{aligned}
$$ \& Sdsm college \& Second Year \& MSc \& Paid <br>

\hline 5 \& Sandeep Rammurari Yadav \& sy4212621@gmail.c om \& SDSM

college palghar \& | Second |
| :--- |
| Year | \& MSc Pa \& Paid <br>

\hline 6 \& Sarath U Nair \& sarathunni2010@g
mail.com \& Sdsm college \& Second Year \& MSc Paid \& Paid <br>

\hline 7 \& Sakshi Tiwari \& Tiwarishakshi765@ gmail.com \& | S.D.S.M |
| :--- |
| College |
| Palghar | \& Second Year \& MSc Pa \& Paid <br>

\hline 8 \& Kishan K.B. Gautam \& ktheknowledgeworld 788712@gmail.com \& Sonopant Dandekar Sikshan Mandali Palghar \& Second Year \& MSc Pr \& Paid <br>

\hline 9 \& Kajol Khilare \& kajolkhilare16@gma il. com \& S. D. S. M College, Palghar \& Second Year \& | MSc | P |
| :--- | :--- | \& Paid <br>

\hline 10 \& Afrin Azad Shaikh \& shaikhafrin301@gm ail. com \& \[
$$
\begin{aligned}
& \text { S.D.S.M } \\
& \text { college } \\
& \hline
\end{aligned}
$$

\] \& Second Year \& | MSc | P |
| :--- | :--- | \& Paid <br>

\hline 11 \& Mansi Gopal Goenka \& mansigoenka777@g mail.com \& \[
$$
\begin{aligned}
& \text { S.D.S.M } \\
& \text { college }
\end{aligned}
$$

\] \& Second Year \& | MSc | P |
| :--- | :--- | \& Paid <br>

\hline 12 \& Siddhi Santosh Shinde \& Siddhi120074@gma il.com \& Sonopant dandekar college (palghar) \& Second Year \& MSc \& Paid <br>
\hline \& \& vartakaarya5@gmail com \& Sonopant
Dandekar
College,
Palghar \& Second Year \& MSc \& Paid <br>
\hline \& \& tshivangi753@gmail com \& S. D. S. M College Palghar 401404 \& Second Year \& MSc \& Paid <br>

\hline 14 \& Shivangi Rajnarayan Tiwari \& | Pratibhavishwakarm |
| :--- |
| a216@gmail.com | \& | SDSM college, |
| :--- |
| palghar | \& Second Year \& Bsc Biotechnol ogy \& Paid <br>

\hline 15 \& Vishwakarma \& hrishipalave100@g mail com \& Sonopant Dandekar \& Second Year \& Bsc biotechnol ogy \& Paid <br>
\hline 16 \& Hrishikesh palave \& chippoo naudiyal14 \& Sonopat dandekar sikhshan mandali \& Second Year \& B.SC \& Paid <br>
\hline
\end{tabular}

Disha Naudiyal

| 18 | Shreyash Dixit | shreyashd2207@gm ail.com | $\begin{array}{\|l} \hline \text { SDSM } \\ \hline \text { S.D.S.M } \\ \text { College, } \\ \text { Palghar } \end{array}$ | Second Year | B. Sc | Paid |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 19 | Vedant Santosh Gharat | gharatvedant6@gm ail.com |  | Second Year | B.SC | Paid |
| 20 | Aakanksha Madhav Behere | akmbehere@gmail.c om | Sonopant Dandekar Shikshan Mandali's College | Second Year | B.SC | Paid |
| 21 | Anisha Santosh Bhoir | anishabhoir2003@g mail.com |  | Second Year | B.SC <br> Biotechnol ogy | Paid |
| 22 | Ajmi Shaji Khan | ajmishaji524@gmail. com | $\begin{aligned} & \text { S.D.S.M } \\ & \text { College } \end{aligned}$ | Second Year | Bsc <br> Biotechnol ogy | Paid |
| 23 | Khushboo Shekhawat | shekhawatkhushboo 951@gmail.com | Sdsm | Second Year | Bsc biotechnol ogy | Paid |
| 24 | Jitu krishna karbat | jitukarbat57@gmail. com | SDSM college | Second Year | $\begin{array}{\|l\|} \hline \text { B.sc } \\ \text { biotechnol } \\ \text { ogy } \\ \hline \end{array}$ | Paid |
| 25 | Rai Vani datt Ashok Kumar Vandana | vanirai66@gmail.co m | S.D.S.M. | Second Year | $\begin{aligned} & \hline \text { Bsc } \\ & \text { biotechnol } \\ & \text { ogy } \end{aligned}$ | Paid |

## Students Attendance List



Sonopant Dandekar Arts, V.S.Apte Commerce \& M.H.Mehta Science College, Palghar Dist-Palghar (401.404)
Semester based Credit \& Grading System
Attendance of students for Tutorial/Assisnment/Proiects/Class test
Academic Year 2014-2015

Class: $\qquad$ Div.: $\qquad$ Subject: EV 9 course course: $\qquad$ Semester: $\qquad$
Paper No. $\qquad$ Name of Assoc. Prot. Mes Ishumeri Hehta


Signature of Asst/ Assoc. Prof.


Senegant Dandekar Arts. Y. S.Apte Commerse \& M, H.Mehta Sclence Collese, Palghat Dist-Palahar (401 404)
Semester based Credit \& Grading System
Altendance of students for Tutoria/Asidienment/Prolects/Class tess $28 / i 1 / 2 \%$
Asademke Yeat 2014-2015
class: $\qquad$ Div $\qquad$ subject: 乏VS cousbe Course $\qquad$ Samester $\qquad$
Paper No. Name of Assoc. Prot. Nyati Palul


Date: $24 \mid 11 / 22$
Signature of Asst/Assoc. Prot

Sonopant Dandekar Arts, V.S.Apte Commerce \& M. M, Meta Science Gollegt. Palgher Dist-Paighar (401 404) Attendance of students for Tutoria/Asslament/Prolects/class test Academic Year 2014-2015

Class: $\qquad$ Div. $\qquad$ Subject: EVS course Course: $\qquad$ Semester: $\qquad$
Paper No. $\qquad$ Name of Assoc. Prof. Hardik Ais cheri i


Date: $29 / 11 / 22$
Signature of Asst/ Assoc. Prof.

## Attendance of students for Tutorisi \& Greding System <br> Academic Year 2014-2015

 Class: Div. - subject: \&VSCertivicalicousePaper No. - Name of Assoc. Prof. Ahailaj a Poriour


Date: 0914123

## Certificate of Students




## SONOPANT DANDEKAR SHIKSHAN MANDALI'S

Sonopant Dandekar Arts, V. S. Apte Commerce and
M. H. Mehta Science College, Palghar

Shri Dahyabhai Amritlal Shah Institute of Biotechnology
Certificate of Completion
This certificate is awarded to
Behere Aakanksha Madhav
of Sonopant Dandekar College Studying in B.SC SECOND YEAR Biotechnology, for successful completion of a three month course on "Environment Analysis" organized by Department of Biotechnology, Sonopant Dandekar College,

Palghar, in the AY. 2022-2023


DR. SHILPA GHARAT
Co-ordinator Dept. of Biotechnology,
Convenor

IQAC Co-ordinator

DR. KIRAN SAVE Principal

## Report of Program

SDSM College's Biotechnology department started a EVS Certificates course from $4^{\text {th }}$ October, 2022 for academic year 2022-23. Total 25 students take part in this certificate course. This certificate course will help students for employability, inculcate scientific temperament among the students to understand environmental and agricultural issues and train the student to determine the quality of soil and water and create awareness about soil and wastewater treatment processes.

Duration: 3 Months
Format: Lectures, Practical and test
Date of Commencement: $4^{\text {th }}$ October, 2022
No. of Students passed: 25

Shipe $P$
Dr. Shilpa Gharat Head \& Course Coordinator Department of Biotechnology

