



Pravara Medical Trust's
Arts, Commerce and Science College
Shevgaon

Shevgaon, Tal-Shevgaon, Dist-Ahmednagar.



Department of Chemistry

Organized

“Syllabus Framing Workshop”

On

Certificate Course: Soil and Water Testing

09th July 2019



2019-20

Date:-03/07/2019

To,
Principal,
Pravara Medical Trust's,
Arts, Commerce and Science College,
Shevgaon.

Subject: - Give the permission for Syllabus Framing Workshop of Certificate Course on Soil and Water Testing ...

Respected Sir,

With above mentioned subject, the Chemistry Department has plans organize Certificate course on Soil and Water Testing for Undergraduate Students. This course duration is 45 hours/90 Days with theory and practical so give the permission for said course syllabus framing Workshop on 09th July 2019.

Therefore, give the permission for said Certificate Course Syllabus framing workshop.

Syllabus Framing Committee as follows:

| Sr. No. | Name of Person | Designation |
|---------|-------------------------|----------------------------------|
| 1 | Prof. Bedre Varad S. | Head of Department (Chairman) |
| 2 | Prof. Ugale Sonali B. | Subject Expert (other college) |
| 3 | Prof. Kedar Vitthal B. | Subject Expert (other college) |
| 4 | Prof. Sable Priyanka N. | Member (Representative) |
| 5 | Prof. Toke Priyanka R. | Member (Representative) |
| 6 | Prof. More Namdev R. | Coordinator (Course Coordinator) |

Permitted
[Signature]

[Signature]
Course Coordinator
COORDINATOR



Arts, Commerce and Science College, Shevgaon

Tal: Shevgaon Dist: Ahmednagar 414502 Maharashtra, India

Tel: 02429 223031 Fax: 02429 223399 Email: pmt.acsc@gmail.com



College Code: 1481

College ID: PU/AN/Sci/136/2013

Website: www.pmtacscollege.com

Date: - 04/07/2019

To,
Prof. Ugale Sonali B.
Department of Chemistry,
New Arts, Commerce and Science College,
Shevgaon.

**Subject: - About the Workshop of Syllabus Framing on "Soil and Water Testing"
Certificate course...**

Dear Sir,

With above mentioned subject, Chemistry Department has plan to organize Academic year 2019-20 Certificate course on "Soil and Water Testing" for Undergraduate Students. This course duration is 45 hours/ 90 Days with theory and practical.

You are nominated as a subject expert for the syllabus framing committee of the said course. Department of chemistry organizes a syllabus framing workshop of "Soil and Water Testing" **09th July 2019 at 10:00 am.**

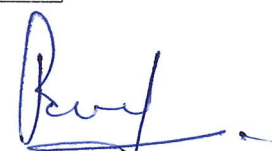
We request you to attend the said workshop and help us to frame syllabus.

Syllabus Framing Committee as follows:

| Sr. No. | Name of Person | Designation |
|---------|-------------------------|----------------------------------|
| 1 | Prof. Bedre Varad S. | Head of Department (Chairman) |
| 2 | Prof. Ugale Sonali B. | Subject Expert (other college) |
| 3 | Prof. Kedar Vitthal B. | Subject Expert (other college) |
| 4 | Prof. Sable Priyanka N. | Member (Representative) |
| 5 | Prof. Toke Priyanka R. | Member (Representative) |
| 6 | Prof. More Namdev R. | Coordinator (Course Coordinator) |

Received
Ugale




Principal
Arts, Comm. & Sci. College
Shevgaon, Dist Ahmednagar



Arts, Commerce and Science College, Shevgaon

Tal: Shevgaon Dist: Ahmednagar 414502 Maharashtra, India

Tel: 02429 223031 Fax: 02429 223399 Email: pmt.acsc@gmail.com



College Code: 1481

College ID: PU/AN/Sci/136/2013

Website: www.pmtacscollege.com

Date: - 04/07/2019

To,
Prof. Kedar Vitthal B.
 Department of Chemistry,
 Abasaheb Kakade Arts College Bodhegaon,
 Tal-Shevgaon, Dist-Ahmednagar.

**Subject: - About the Workshop of Syllabus Framing on "Soil and Water Testing"
 Certificate course...**

Dear Sir,

With above mentioned subject, Chemistry Department has plan to organize Academic year 2019-20 Certificate course on "Soil and Water Testing" for Undergraduate Students. This course duration is 45 hours/ 90 Days with theory and practical.

You are nominated as a subject expert for the syllabus framing committee of the said course. Department of chemistry organizes a syllabus framing workshop of "Soil and Water Testing" **09th July 2019 at 10:00am.**

We request you to attend the said workshop and help us to frame syllabus.

Syllabus Framing Committee as follows:

| Sr. No. | Name of Person | Designation |
|---------|-------------------------|----------------------------------|
| 1 | Prof. Bedre Varad S. | Head of Department (Chairman) |
| 2 | Prof. Ugale Sonali B. | Subject Expert (other college) |
| 3 | Prof. Kedar Vitthal B. | Subject Expert (other college) |
| 4 | Prof. Sable Priyanka N. | Member (Representative) |
| 5 | Prof. Toke Priyanka R. | Member (Representative) |
| 6 | Prof. More Namdev R. | Coordinator (Course Coordinator) |

Received
 [Signature]



[Signature]

Principal
Principal

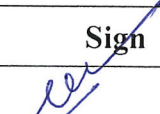
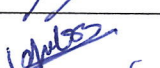
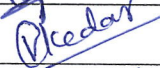



Arts, Comm. & Sci. College
 Shevgaon, Dist Ahmednagar

Date: 09/07/2019

Department of Chemistry Notification

Subject: About the syllabus for the Certificate Course...

With the above mentioned subject, as per permission of Principal, Department of Chemistry has decided to run a certificate course on "Certificate Course on Soil and Water Testing" for the academic year 2019-20. For the said Certificate course Department of Chemistry organized a Workshop on Syllabus framing. The expert panel has approved the syllabus to implement for the academic year 2019-20.

| Sr. No. | Name of the Expert | Designation | Sign |
|---------|-------------------------|--------------------|---|
| 1 | Prof. Bedre Varad S. | Chairman |  |
| 2 | Prof. Ugale Sonali B. | Expert |  |
| 3 | Prof. Kedar Vitthal B. | Expert |  |
| 4 | Prof. Sable Priyanka N. | Member |  |
| 5 | Prof. Toke Priyanka R. | Member |  |
| 6 | Prof. More Namdev R. | Course Coordinator |  |

❖ Attachment: Detailed Syllabus



Pravara Medical Trust's,
Arts, Commerce and Science College, Shevgaon
Tal-Shevgaon, Dist-Ahmednagar 414502.
Department of Chemistry
Certificate Course on Soil and Water Testing
Syllabus

Objectives 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.

Course Outcomes:

After completion of the certificate course in soil and water testing, student will be able to:

- 1) Understand the Role of micronutrients in plant growth and development.
- 2) Soil testing – various soil testing methods can be learnt.
- 3) Impart knowledge on soil health, its assessment and maintenance for sustaining soil productivity.
- 4) Clear understanding of soil health and soil quality indices.
- 5) Describe the main sources of water pollution, the main types of pollutant and how each type may controlled.
- 6) Understand the role of water testing: Water quality parameters like pH, ECD, Hardness, alkalinity, DO.

Certificate Course on Soil and Water Testing

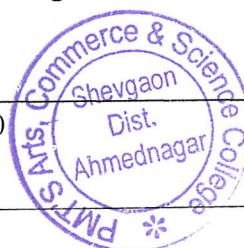
Detail Syllabus: Theory

Chapter 1: Soil Testing

Introduction, Types of Soil, Soil pollutants, role of soil testing, Collection of soil sample for testing, determination of soil parameters viz., pH, EC, Organic carbon, NPK, soil testing for micronutrients, Gypsum requirements of soil, Lime requirement of soil, Uses of soil testing.

Chapter 2: Water Testing

Introduction, Types of Water, Water pollutants, role of water testing, common sampling tools and accessories, sample collection procedure, water quality parameters viz., pH, electrical conductivity, chlorides, sulphates, calcium, magnesium, sodium, potassium, Water quality indices and suitability.



Detail Syllabus: Practical

Part-I: Soil Testing

- 1) To determine pH of given soil sample.
- 2) To determine salinity of given soil sample.
- 3) To determine nutrient content (NPK) of soil.
- 4) To determine micronutrient content of soil sample.
- 5) To determine electrical Conductivity of given soil sample.


Part-II: Water Testing

- 1) To determine total hardness of water.
- 2) To determine pH of given water sample.
- 3) To determine alkalinity of water.
- 4) To determine TDS of given sample of water.
- 5) To determine dissolved oxygen in water sample.
- 6) To determine conductivity of water sample.


References:-

1. Low cost waste water treatment technologies-R. K. Trivedy and Siddharth Kaul
2. Standard Methods for the examination of water and waste water-APHA (Americal Public Health Association), AWWA (American Water Works Association), WEF (Water Environmental Federation)
3. Hydrology - Principles, analysis and Design - H. M Ragnath, New age International Publications.
4. An Introduction to Environmental pollution- B. K. Sharma and H. Kaur
5. Pollution and Bioremediation- PC. Trivedi

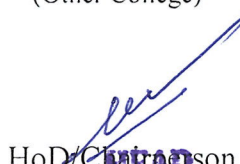

Member
(Representative)



Member
(Representative)


Subject Expert
(Other College)


Subject Expert
(Other College)


Coordinator
(Certificate Course)
COORDINATOR


HoD/Chairman
(Chairman)
Department of Chemistry
PMT'S Arts Commerce & Science
College, Shevgaon, Dist. A'Nagar


Principal
Arts, Comm. & Sci. College
Shevgaon, Dist. Ahmednagar

Pravara Medical Trust's



Arts, Commerce and Science College, Shevgaon

Tal: Shevgaon Dist: Ahmednagar 414502 Maharashtra, India

Tel: 02429 223031 Fax: 02429 223399 Email: pmt.acsc@gmail.com



College Code: 1481

College ID: PU/AN/Sci/136/2013

Website: www.pmtacscollege.com

Date: - 09/07/2019

To,
Prof. Ugale S. B.
Department of Chemistry,
New Arts, Commerce and Science College,
Shevgaon, Dist- A.Nagar.

Subject: Thanking Letter...

Respected Sir,

With the above mentioned subject, our college has organized "Syllabus Framing Workshop of Certificate Course on Soil and Water Analysis" for the Graduate Students of Chemistry Department on 09th July 2019. We are thankful to you that you have attended the said workshop and help us to frame syllabus.

We wish you best wishes for future.

Thanking You!

*Recvd
19/7/19*



[Signature]
Principal
Arts, Comm. & Sci. College
Shevgaon, Dist Ahmednagar

Pravara Medical Trust's



Arts, Commerce and Science College, Shevgaon



Tal: Shevgaon Dist: Ahmednagar 414502 Maharashtra, India

Tel: 02429 223031 Fax: 02429 223399 Email: pmt.acsc@gmail.com

College Code: 1481

College ID: PU/AN/Sci/136/2013

Website: www.pmtacscollege.com

Date: - 09/07/2019

To,
Prof. Kedar V. B.
Department of Chemistry,
Abasaheb Kakade Arts College Bodhegaon,
Tal- Shevgaon, Dist- Ahmednagar.

Subject: Thanking Letter...

Respected Sir,


With the above mentioned subject, our college has organized "Syllabus Framing Workshop of Certificate Course on Soil and Water Analysis" for the Graduate Students of Chemistry Department on 09th July 2019. We are thankful to you that you have attended the said workshop and help us to frame syllabus.

We wish you best wishes for future.

Thanking You!

Received
Kedar




Principal
Arts, Comm. & Sci. College
Shevgaon, Dist. Ahmednagar

Pravara Medical Trust's,
Arts, Commerce and Science College Shevgaon

Tal-Shevgaon, Dist-Ahmednagar 414502.

Department of Chemistry
Certificate Course on Soil and Water Testing
2019-20

Syllabus Framing Workshop on Certificate course on Soil and Water Testing
Report

Date: 09th July 2019

Time: 10:00 AM

Objective of the Workshop:

The aim of the workshop was to frame a comprehensive syllabus for the Certificate Course on Soil and Water Testing, tailored to enhance students practical knowledge and skills in soil and water analysis, aligning with academic and industry requirements.

The following committee was involved in making the syllabus:

- **Chairman of the Committee & Head of Department:** Prof. Varad Bedre
- **Subject Expert:** Prof. Sonali Ugale (New Arts, Commerce, and Science College, Shevgaon)
- **Subject Expert:** Prof. Vitthal Kedar (Abasaheb Kakade Arts College, Bodhegaon)
- **Committee Members:**
 - Prof. Priyanka Sable (PMT's, Arts Commerce and Science College, Shevgaon)
 - Prof. Priyanka Toke (PMT's, Arts Commerce and Science College, Shevgaon)
- **Course Coordinator:** Prof. Namdev More

The committee engaged in a detailed and constructive discussion to design syllabus for the certificate course on Soil and Water Testing. Below are the key points discussed:

1. Objective of the Course

- **Prof. Bedre Varad** emphasized that the syllabus should focus on equipping students with essential theoretical knowledge and practical skills in soil and water analysis, aligning with industry standards.
- The course should promote environmental awareness and address local agricultural and industrial needs.

2. Course Structure

- **Prof. Sonali Ugale** proposed a modular structure dividing the syllabus into:
 - **Basic Concepts:** Fundamentals of soil and water chemistry, properties, and significance.
 - **Analytical Techniques:** Instrumental and non-instrumental methods used for testing.
- The need for a balance between theory and practical sessions was emphasized to ensure hands-on learning.



3. Practical Components

- **Prof. Vitthal Kedar** suggested including the following in the practical modules:
 - Testing soil pH, moisture, and nutrient levels.
 - Water quality assessment, including physical, chemical, and biological parameters.

4. Innovative Additions

- **Prof. Priyanka Sable** recommended incorporating case studies and problem-solving sessions to enhance critical thinking and application skills.
- **Prof. Priyanka Toke** suggested adding a segment on modern tools like Geographic Information Systems (GIS) for soil mapping and data analysis.

5. Evaluation and Certification

- **Prof. Namdev More** outlined a two-phase evaluation system:
 - **Theory Assessment:** Written exams to evaluate conceptual understanding.
 - **Practical Assessment:** Hands-on tests analytical skills.
- He proposed issuing certificates to students who successfully complete the course, with grades based on their overall performance.


Outcomes:

- A draft syllabus for the Soil and Water Testing Certificate Course was approved by Syllabus Framing Committee.

The Department of Chemistry extends gratitude to the committee members, subject experts for their invaluable contributions to the success of the workshop.


COORDINATOR


HEAD
Department of Chemistry
PMT'S Arts Commerce & Science
College, Shevgaon, Dist. A'Nagar


Principal
Arts, Comm. & Sci. College
Shevgaon, Dist Ahmednagar



Pravara Medical Trust's,
Arts, Commerce and Science College, Shevgaon
 Tal-Shevgaon, Dist-Ahmednagar 414502
 Department of Chemistry
Certificate Course on Soil and Water Testing 2019
Photo Gallery



Certificate Course on Soil and Water Testing-2019 Syllabus Framing Workshop Photo

[Signature]
COORDINATOR

[Signature]
HEAD
 Department of Chemistry
 PMT'S Arts Commerce & Science
 College, Shevgaon, Dist. A'Nagar

[Signature]
Principal
 Arts, Comm. & Sci. College
 shevgaon, Dist. Ahmednagar