

Shram Sadhana Bombay Trust's
COLLEGE OF ENGINEERING AND TECHNOLOGY
BAMBHORI, POST BOX NO. 94, JALGAON – 425001. (M.S.)

Brief Report of Add on Course

“Analysis of Waste Water by Various Chemical and Biochemical Laboratory Methods”

Date and Venue / Location: 19-25 May, 2022, Smart Class Room No.125 & Departmental Laboratories.

Aim / Purpose: To inculcate waste water analysis techniques through experimentation.

Objectives: The students will be able to

- Identify different types of waste.
- Apply the chemical & biochemical methods for waste water analysis.
- Understand instrumental techniques of analysis.
- Use techniques of analysis through experimentation.
- Demonstrate basics of waste treatment.

Participant's Profile: Students from S.E. Chemical & Biotechnology Engineering.

Description about the Program: Department of chemical & biotechnology engineering jointly conducted one week (30 Hours) add on course on “Analysis of Waste Water by Various Chemical and Biochemical Laboratory Methods”.

As resource persons faculty members of Chemical Engineering Department Dr. N.Y.Ghare, Mr. V.P.Sangore, Ms. S.S.Baniya and faculty members of Biotechnology Engineering Mrs. Sarika S.Pawar, Mr. Jayant Parpalliwar, Mr. Swapnil Khillare explained participants regarding chemical and biochemical instrumental techniques of analysis of waste water. Participants also underwent hands on training on instruments like pH meter, Conductivity meter, Colourimeter, DO Meter, TDS meter etc. for waste water analysis.


Feedback & Analysis: More than 90% participants rated add on course in excellent category by strongly agreeing regarding relevant content and applicability of the course for their overall development.

Outcomes: The students will be able to apply the techniques of waste water analysis.

Recommendation: Students are interested to attend such type of add on course in next academic year also, thus such activity to be conducted once in a semester for the overall development of students.


Mrs. Sarika S. Pawar
Course Coordinator


Shri V.P. Sangore
Course Coordinator


Dr. V.R. Diware
HOD (Chemical Engineering)
Head of the Dept.
Chemical Engg.
College of Engg. & Tech,
Post. Box No. 94, Jalgaon

SSBT'S COLLEGE OF ENGINEERING & TECHNOLOGY, DEPARTMENT OF CHEMICAL AND BIOTECHNOLOGY ENGINEERING, JALGAON


Add On Course 2021-22 (Term II)

"Analysis of Waste Water by Various Chemical and Biochemical Laboratory Methods"
(From May 19 to 25, 2022)

Schedule of Course

SN	Date and Day	Session -1 11.00AM -01.00. PM	Session -2 02.00PM -04.00PM	Session -3 04.00PM-05.00PM
1	19/05/2022 Thursday	Introduction to Chemical and Biological Methods of Analysis Mrs. Sarika S. Pawar	Hardness & pH Analysis of Waste Water Mrs. Sarika S. Pawar	Research Paper Writing Mr.V.P. Sangore
2	20/05/2022 Friday	Colorimetric & Conductometric Techniques of Analysis Mr.V.P. Sangore	Conductance Measurement & Concentration Analysis of Waste Water Mr.V.P. Sangore	PPT Presentation Techniques Mrs. Sarika S. Pawar
3	21/05/2022 Saturday	DO and BOD Analysis of Waste Water Dr. Nikhill Y. Ghare	Analysis of Samples for DO and BOD of Waste Water Dr. Nikhill Y. Ghare	Group Discussion Ms. Sakshi S. Baniya
4	23/05/2022 Monday	COD of Waste Water. Ms. Sakshi S. Baniya	Analysis of Samples for COD of Waste Water Ms. Sakshi S. Baniya	Importance of Internship & Internship Report Writing Dr. Nikhill Y. Ghare
5	24/05/2022 Tuesday	Biological Examination of water: Algae, Bacteria and Protozoa Mr. Swapnil N. Khillare	Biochemical Activities of Bacteria in Waste Water Mr. Swapnil N. Khillare	Personality Development Mr. Jayant Parpalliwar
6	25/05/2022 Wednesday	Water Pollution and Biological Treatment of Wastewater Mr. Jayant Parpalliwar	Biological Process for Wastewater Treatment Mr. Jayant Parpalliwar	Quiz and Feedback Mr. Swapnil N. Khillare

Course Coordinator : Mr. V. P. Sangore
Mrs. Sarika S. Pawar


Dr.V. R. Diware
HOD

**DEPARTMENT OF BIOTECHNOLOGY AND CHEMICAL ENGINEERING
SSBT's COLLEGE OF ENGINEERING & TECHNOLOGY,
BAMBHORI, JALGAON**

Notice

Date: 17 /05/2022

All the students of S.E Chemical and Biotechnology Engineering are hereby informed that, departments are organizing add-on course for Academic Year 2021-22 (Term-II) on "**Analysis of Waste Water by Various Chemical and Biochemical Laboratory Methods**" from 19/05/2022 to 25/05/2022.



Dr. V. R. Diware
HOD

Copy to : Principal SSBT's COET

DEPARTMENT OF CHEMICAL & BIOTECHNOLOGY ENGINEERING
SSBT's COLLEGE OF ENGINEERING & TECHNOLOGY, BAMBHORI, JALGAON

ADD-ON COURSE 2021-22 (Term-II) for S.E. on

**“Analysis of Waste Water by Various Chemical and Biochemical
Laboratory Methods”
(From May 19-25, 2022)**

Syllabus

Topic 1: Introduction to Chemical and Biological Methods of Analysis

(Resource Person: Mrs. Sarika S. Pawar)

- History
- Principle
- Methods of analysis (Chemical and Biological)
- Limitations
- Applications

Topic 2: Hardness & pH Analysis of Waste Water

(Resource Person: Mrs. Sarika S. Pawar)

- Principle
- Methods of analysis (Hardness & pH)
- Characteristics
- Applications and utilizations

Topic 3: Colorimetric & Conductometric Techniques of Analysis

(Resource Person: Mr.V.P. Sangore)

- Introduction
- Principle of colourimeter
- Instrumentation & applications of colourimeter
- Principle of conductivity meter
- Instrumentation & applications of conductivity meter

Topic 4: Conductance Measurement & Concentration Analysis of Waste Water

(Resource Person: Mr.V.P. Sangore)

- Basic instrumentation of conductivity meter & colourimeter
- Calibration, measurement of conductivity of samples
- Conductometric titration of strong acid Vs strong base
- Selection of filter in colourometric measuments
- Investigation of unknown concentration

Topic 5: DO and BOD Analysis of Waste Water (Resource Person: Dr. Nikhill Y. Ghare)

- Principle
- Methods of Analysis
- Standard values
- Instrumentation
- Significance

**Topic 6: Analysis of Samples for DO and BOD of Waste Water
(Resource Person: Dr. Nikhill Y. Ghare)**

- Introduction
- Methods of Analysis
- Test procedures
- Calculations
- Advantages & Limitations

Topic 7: COD of Waste Water (Resource Person: Ms. Sakshi S. Baniya)

- Introduction
- Importance of COD analysis
- Methods of Analysis
- Application of COD analysis
- Advantages & Limitations

**Topic 8: Analysis of Samples for COD of Waste Water
(Resource Person: Ms. Sakshi S. Baniya)**

- Introduction
- Methods of Analysis
- Test procedures
- Calculations

**Topic 9: Biological Examination of water: Algae, Bacteria and Protozoa
(Resource Person: Mr. Swapnil N. Khillare)**

- Introduction
- Examination of water sample
- Microorganisms (Aerobic and Anaerobic Bacteria)
- Microbial activity
- Microbiological methods of Analysis

Topic 10: Biochemical Activities of Bacteria in Waste Water
(Resource Person: Mr. Swapnil N. Khillare)

- Introduction
- Examination of water sample
- Pathogenic bacteria
- Biochemical Activities
- Biochemical/Physiological Properties

Topic 11: Water Pollution and Biological Treatment of Wastewater
(Mr. Jayant Parpalliwar)

- Principle
- Types of Pollutants
- Biological methods of Treatment
- Environmental effects
- Applications and utilization

Topic 12: Biological Process for Wastewater Treatment
(Resource Person: Mr. Jayant Parpalliwar)

- Introduction
- Biological wastewater treatment processes
- Biological treatment systems
- Stages of the wastewater treatment
- Applications

DEPARTMENT OF CHEMICAL ENGINEERING

SSBT's COLLEGE OF ENGINEERING & TECHNOLOGY, BAMBHORI, JALGAON

ADD-ON COURSE 2021-22 (Term-II) for S.E.Chemical & Biotechnology

On

“Analysis of Waste Water by Various Chemical and Biochemical Laboratory Methods”

(From May 19-25, 2022)

FEEDBACK FORM

Name of Participant: _____ **Class:** S.E. Chemical Engg./Biotechnology

Mark ✓ in appropriate box

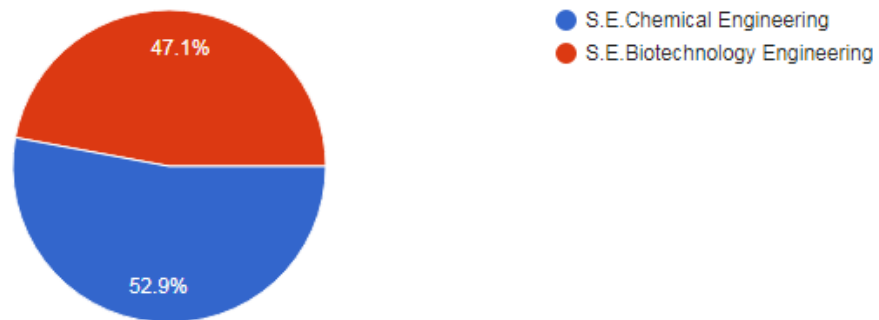
Sr.No.	Survey Question	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	The content of Add-on Course was relevant					
2	All the training sessions of Add-on Course were interesting					
3	The mix of presentations and activities used in the Add-on Course was very appropriate					
4	The Audio and Video quality of Add-on Course was excellent					
5	This Add-on Course is helpful for overall development					

Date: 25/05/2022

Signature: _____

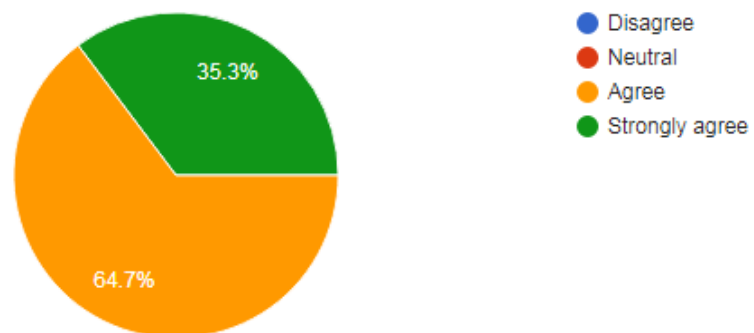
Class

17 responses



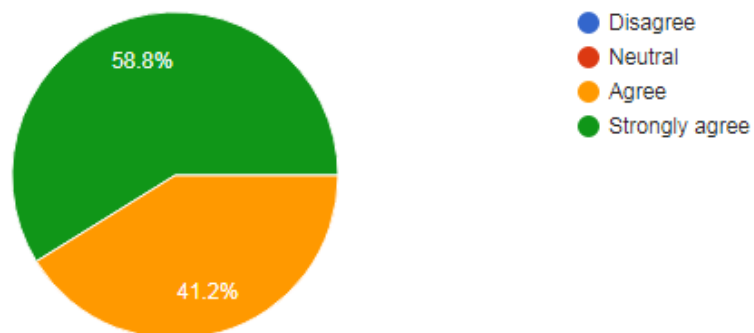
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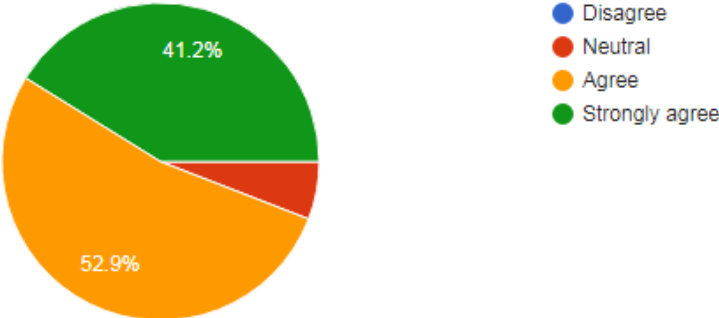
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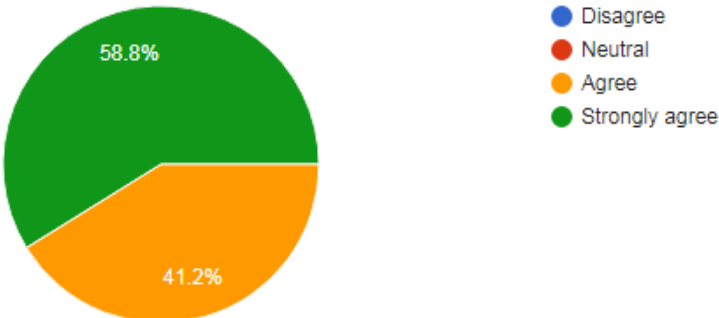
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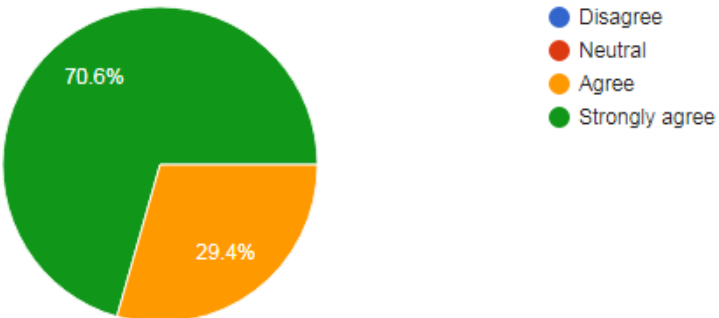
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17 responses



This Add-on Course is helpful for overall development

17 responses



Add-On Course



on

“Analysis of Waste Water by Various Chemical and Biochemical Laboratory Methods”

(From May 19-25, 2022)

Result of Quiz

Sr. No.	Name Of Student	Department	Score
1	Pranav Sunil Chaudhari	Bio	27 / 30
2	Prathamesh Jadhav	Bio	30 / 30
3	Suryawanshi Hemangi Subhash	Bio	29 / 30
4	Shivam Nandkumar Bhole	Bio	30 / 30
5	Ankit Bhagwan Borse	Bio	27 / 30
6	Chetan Yuvraj Patil	Bio	26 / 30
7	Divya Vinod Mali	Bio	24 / 30
8	Gaurav Satish Shende	Chem	25 / 30
9	Tanmay Sureshsing Rajput	Chem	28 / 30
10	Nayan Rajendra Chaudhari	Chem	21 / 30
11	Vasave Vinod Dharma	Chem	22 / 30
12	Patil Mahesh Narayan	Chem	24 / 30
13	Harshad Rajendra Patil	Chem	24 / 30
14	Vaishnavi Sanjay Patil	Chem	21 / 30
15	Zambare Devendra Narendra	Chem	25 / 30
16	Chetan Kailas Nikam	Chem	25 / 30
17	Narendra. Dnyaneshwar Bhadane	Chem	26 / 30

Course Coordinator : Mr. V. P. Sangore 
Mrs. Sarika S. Pawar 



**SSBT'S COLLEGE OF ENGINEERING & TECHNOLOGY,
DEPARTMENT OF BIOTECHNOLOGY AND CHEMICAL ENGINEERING, JALGAON**

Add On Course 2021-22 (Term II)

(From May 19-25, 2022)

Attendance Report

SN	Name of student	19/05/22	20/05/22	21/05/22	23/05/22	24/05/22	25/05/22
SE Biotechnology							
1	Bhore Shivam Nandkumar	P	P	P	P	P	P
2	Borse Ankit Bhagwan	P	P	P	P	P	P
3	Chaudhari Pranav Sunil	P	P	P	P	P	P
4	Jadhav Prathamesh Uddhav	P	P	P	P	P	P
5	Mali Divya Vinod	P	P	P	P	P	P
6	Patil Chetan Yuvraj	P	P	P	P	P	P
7	Sonawane Archana Krishna	P	P	P	P	P	P
8	Suryawanshi Hemangi Subhash	P	P	P	P	P	P
SE Chemical Engineering							
SN	Name of student	19/05/22	20/05/22	21/05/22	23/05/22	24/05/22	25/05/22
1.	Bhadane Narendra Dnyaneshwar	P	P	P	P	P	P
2.	Chaudhari Nayan Rajendra	P	P	P	P	P	P
3.	Chaudhari Pragati Prakash	P	P	P	P	P	P
4.	Dhangar Pravin Pandhari	P	P	P	P	P	P
5.	Kokane Yogesh Govinda	P	P	P	P	P	P
6.	Moris Vaibhav Prakash	P	P	P	P	P	P
7.	Patil Harshad Rajendra	P	P	P	P	P	P
8.	Patil Vaishnavi Sanjay	P	P	P	P	P	P
9.	Pawar Himanshu Bharatsing	P	P	P	P	P	P
10.	Rajput Tanmay Sureshsing	P	P	P	P	P	P
11.	Shende Gaurav Satish	P	P	P	P	A	P
12.	Vasave Vinod Dharma	P	P	P	P	P	P
13.	Zambare Devendra Narendra	P	P	P	P	P	P
14.	Nikam Chetan Kailas	P	P	P	P	P	P
15.	Patil Mahesh Narayan	P	P	P	A	P	P
16.	Rajput Nikhil Bharatsing	P	P	P	P	P	P

Course Coordinator 1) Prof. V. P. Sangote 
2) Prof. Sarika S. Pawar 

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