

Report of

**“5.Days Hands On Training Programme on Advanced Instrumentation Techniques”**

UNDER ED Cell

Organized by

P.G. Research Centre, Department of Botany, T. C. College, Baramati (Autonomous)

(2<sup>nd</sup> to 7<sup>th</sup> March. 2024, Time 11.30 a.m to 3. 00 p.m)

(Academic Year: 2023-24)

Sr. No.	Item	Particulars
1	Name of Department	Department of Botany
2	Title of Programme	5 days Hands on Training Programme on Advanced Instrumentation Techniques”
3	Date of Programme	2 <sup>nd</sup> - 7 <sup>th</sup> March . 2024
4	Name and address of Resource Person	Department of Chemistry: Prof. Dr. S. R. Kale, Dr. Y. N. Indulkar, Dr. R. S. Bhondave, Dr. N. C. Dighe., Miss. G. S. Bhunje, Miss. G. D. Pirale, (Dept. of Botany)Dr. M. P. Patil
5	Level of Programme	College
6	Funded by	ED cell of T. C. College, Baramati
7	No. of Beneficiaries	21

**Detail information of the programme**

The details of each session is given below,

Day and Date	Time	Session Speaker	Technique
Saturday 02/02/2024	11.30 a.m to 12. 30 p.m	Dr. M.P. Patil	Micrometry
	2.00 p.m to 3. 00 p.m.		Centrifugation
Monday 04/02/2024	11.30 a.m to 12. 30 p.m	Dr. Y. N. Indulkar	Preparation and Standardization of Solutions
	2.00 p.m to 3. 00 p.m		




Tuesday 05/02/2024	11.30 a.m to 12. 30 p.m	Miss. G.D.Pirale	HPLC
	2.00 p.m to 3. 00 p.m.		
Wednesday 06/02/2024	11.30 a.m to 12. 30 p.m	Prof. G. S. Bhunje	UV spectroscopy
	3.00 to 4.00 p.m.	Dr. N. C. Dige	
	1.00 p.m to 2.00 p.m	Dr. R. S. Bhondwe	IR spectroscopy
	2.00 a.m to 3.00 p.m		
Thursday 07/02/2024	11.15 a.m to 12.30 p.m	Prof. S. R. Kale	Potentiometer, pH. Conductometry, Colorimetry
	2.00 to 3.00 p.m	Dr. Y. N. Indulkar	

Total 21 students from M. Sc II Botany were beneficiaries of this workshop. Students showed keen involvement and attentive in all theory and Hands on demonstration sessions for five days

We are very much thankful to Prin. Dr. Avinash Jagtap for permission to conduct this training programme. We are also grateful to Dr. V. C. Kakade, Chairman. E D. cell for his kind guidance and permission for utilization of grants.

  
Co-ordinator  
of workshop

  
Head  
Dept. of Botany

  
ED cell  
Chairman

  
IQAC  
Co-ordinator

  
Principal



Date: 25/01/2024

To,  
The Principal,  
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati.

Subject: Permission to organize "Hands on training programme on Advanced instrumentation techniques for M. Sc II students" under ED cell.

Respected Sir,

We are willing to organize Hands on training programme for M. Sc II students on Advanced Instrumentation Techniques in Second Week of February 2024 under ED cell. In this workshop we wish to organize lecture and demonstration on the different techniques in our Common Facility Centre as well as department of Chemistry and Botany. The details of training programme are as follows.

Sr. No	Name of Instrument	Time	
		12.00 to 1.00 p.m	2.00 to 3.00 p.m.
1	High Pressure Liquid Chromatography (HPLC)	Presentation	Demonstration
2	FT-IR Spectroscopy (FT-IR)		
3	Atomic Absorption spectroscopy (AAS)		
4	UV- Spectroscopy		
5	Potentiometer, pH meter, Conductometry Colorimetry		
6	Flame Photometry, Microtomy, centrifugation		

Total Expenditure : 12 Lectures : 500 Rs/lecture =6000 Rs

Kindly permit us for the same.

Thanking You

  
P. G.  
Co-ordinator

Recommended  
to organize  
activity  
under ED cell  
C.K.K.  
25/1/2024

  
Head  
Department of Botany



Approved  
5/2/24

DEPARTMENT OF BOTANY

**A Report of  
"5 Days Hands On Training Programme on Advanced Instrumentation Techniques"**

UNDER ED Cell

Organized by

P.G. Research Centre, Department of Botany, T. C. College, Baramati (Autonomous)

(2<sup>nd</sup> to 7<sup>th</sup> Mar 2024, Time 11.30 a.m to 3.00 p.m)

(Academic Year : 2023-24)

To make aware M. Sc II Botany students for interdisciplinary research work using different instrumentation techniques P.G. Research Centre, Department of Botany, T. C. College, Baramati in Collaboration with Central Facility Centre and Department of Chemistry organized "5 Days Hands On Training Programme on Advanced Instrumentation Techniques" under ED cell. Total 12 sessions of for five days were arranged. Each day is followed by lecture on principle and working of instrument from 11.30 a.m to 12.30 p.m and demonstration session on same instrument from 2.00 p.m to 3.00 p.m.

The details of each day session is given as follows,

Day and Date	Time	Session Speaker	Technique
Saturday 02/02/2024	11.30 a.m to 12.30 p.m	Dr. M.P. Patil	Micrometry
	2.00 p.m to 3.00 p.m.		Centrifugation
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	3.00 to 4.00 p.m.	Dr. N. C. Dige	
	1.00 p.m to 2.00 p.m	Dr. R. S. Bhondwe	IR spectroscopy
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Thursday 07/02/2024	11.15 a.m to 12.30 p.m	Prof. S. R. Kale	Potentiometer, pH. Conductometry Colorimetry
	2.00 to 3.00 p.m	Dr. Y. N. Indulkar	

Noted  
Done  
13/03/24



DEPARTMENT OF BOTANY

Total 21 students from M. Sc II Botany were benefitted by this workshop. Students were keenly involved and attentive in all theory and demonstration sessions of five days

We are very much thankful to Prin. Dr. Avinash Jagtap for permission to conduct this training programme. We are also grateful to Dr. V. C. Kakade, Chairman. E D. cell for guidance and utilization of grants.

  
Co-ordinator  
of Workshop

  
Head  
Department of Botany

DEPARTMENT OF BOTANY



Date : 29/02/2024

Anekant Education Society's  
Tuljaram Chaturchand College of Arts, Commerce and Science, Baramati (Autonomous)  
Post Graduate Research Centre, Department of Botany  
In Collaboration with Central Facility Centre and Department of Chemistry organizing

**"Hands on Training Programme on Advanced Instrumentation Techniques"**  
**Under ED CELL**  
**Academic Year: 2023-24**

Time	Details	Saturday 02/02/2024	Monday 04/03/2024	Tuesday 05/03/2024	Wednesday 06/02/2024	Thursday 07/02/2024
11.30 a.m to 12.30 p.m Venue: M 202	Presentation	Centrifugation (MPP)	Preparation and Standardization of Solutions (RSB) YNI	HPLC (GDP)	UV spectroscopy (GSB)	Potentiometer, pH. Conductometry Colorimetry (SRK, YNI)
12.30 a.m to 1.30 p.m Venue: M 202					IR spectroscopy (RSB)	
2.00 to 3.00 p.m. Dept of Chemistry	Demonstration	Microtomy	Safety Working methods in Laboratory (SRK/ YNI)	HPLC (GDP)	UV spectroscopy (NCD)	Potentiometer, pH. Conductometry Colorimetry (SRK, YNI)
2.00 to 3.00 p.m. Venue: CFC					IR spectroscopy (RSB)	



*P. G.*  
P. G.  
Co-ordinator

*[Signature]*  
Head  
Department of Botany

**Anekant Education Society's**  
**Tuljaram Chaturchand College of Art, Commerce and Science, Baramati**  
**Autonomous**  
**P.G. Research Centre, Department of Botany,**  
**Hands on Training Programme on Advanced Instrumentation Techniques**  
**Under ED cell : 2<sup>nd</sup> to 7<sup>th</sup> Mar 2024**  
**Academic Year 2023-24**



**Microtomy and Flame Photometry: Dr. Madhuri P.Patil:02/03/2024**



DEPARTMENT OF BOTANY

**P.G. Research Centre, Department of Botany,  
Hands on Training Programme on Advanced Instrumentation Techniques  
Under ED cell : 2<sup>nd</sup> to 7<sup>th</sup> Nov 2024**



**Session I: Lecture on "HPLC instrument : Miss. Gayatri D. Pirale:05/03/2024**



**Session II: Demonstration of HPLC technique : Miss. Gayatri D. Pirale :05/03/2024**



DEPARTMENT OF BOTANY



**P.G. Research Centre, Department of Botany,  
Hands on Training Programme on Advanced Instrumentation Technique  
Under ED cell 2023-24**



**Session I : Lecture on Potentiometer, pH, Conductometry, Colorimetry:  
Prof. Dr. Sanjay R. Kale: 07/03/2024**



**Session II : Demonstration on Potentiometer, pH, Conductometry, Colorimetry:  
Prof. Dr. Sanjay R. Kale: 07/03/2024**



DEPARTMENT OF BOTANY

**P.G. Research Centre, Department of Botany,  
Hands on Training Programme on Advanced Instrumentation Technique  
Under ED cell 2023-24  
Validictory Session : Group Photo**



Latitude: 18.160106  
Longitude: 74.580154  
Elevation: 579.53±11 m  
Accuracy: 4.8 m  
Time: 07-03-2024 16:58



Anekant Education Society's  
**Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati (Autonomous)**  
 Post Graduate Research Centre, Department of Botany  
 Hands on Training Programme on Advanced Instrumentation Techniques: 02/03/2024 to 07/03/2024  
**ATTENDANCE**

Academic Year: 2023-24

Name of student	Roll No.	02-03-24		04-03-24		05-03-24		06-03-24		07-03-24	
		M	A	M	A	M	A	M	A	M	A
1. Ghodake Nikita Dilip	16551	A	A	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>
2. Sayyad Jasmin Maheeb	16552	A	A	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>
3. Bankar Apurva Jalindar	16553	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>
4. Lonkar Swati Govind	16554	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>
5. Chaudhari Komal Balu	16555	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>
6. Kuchekar Anjali Satish	16556	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>
7. Sonawane Nayana Kishor	16557	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>
8. Kamble Pratiksha Dayanand	16558	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>
9. Kalukhe Rutuja Rajendra	16559	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>
10. Deokate Sayali Sanjay	16560	A	A	A	A	A	A	A	A	A	A
11. Dudhal Nilam Dnyandeo	16561	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>	<del>A</del>



DEPARTMENT OF BOTANY

12	Chanwat Vidya	16562	02/08/24	04/03/24	5/09/24	6/03/24	6/03/24	09/3/24
	Anil		A	A	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
13	Sonwalkar	16563	A	A	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Nikita		A	A	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Rajendra				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
14	Jagtap	16564	A	A	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Sourabh Suresh				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
15	Pandhare	16565			<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Swarda				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Rajendra				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
16	Nikam	16566			<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Harshada				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Sanjay				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
17	Thorave	16567			<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Abhishek				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Kisan				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
18	Markad	16568			<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Priyanka				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Prakash				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
19	Shinde	16569	A	A	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Shrutika Dilip				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
20	Beldar Tejas	16570			<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Chandrakant				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
21	Madane	16571	A	A	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Pratiksha				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Kashiram				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
22	Dhadchire	16573			<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Prerana				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>
	Bhagwan				<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>	<del>Manuwal</del>

pm. pm.

*[Signature]*  
P. G.  
Co-ordinator

DEPARTMENT OF BOTANY

*[Signature]*  
Head  
Department of Botany



**P. G. Research Centre, Department of Botany,  
Hands on Training Programme on Advanced Instrumentation Techniques**

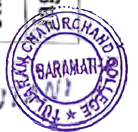
Under ED cell

2<sup>nd</sup> to 7<sup>th</sup> May 2024

Academic Year 2023-24

**Feedback**

Name of Student	Roll No.	Content of Topic and demo. of speaker [Prof. S. R. Kale]	Content of Topic and demo. of speaker [Dr. Y. N. Indulkar]	Content of Topic and demo. of speaker [R. S. Bhondwe]	Content of Topic and demo. of speaker [Prof. G. D. Pirale]	Content of Topic and demo. of speaker [Prof. G. S. Bhunjje]	Content of Topic and demo. of speaker [Dr. N. C. Dige]	Content of Topic and demo. of speaker [Dr. M. P. Patil]	Overall organisation of Training Programme	Was the training programme helpful to improve knowledge?
Lonkar Swati Govind	16554	Exemplary	Better	Exemplary	Better	Better	Better	Exemplary	Excellent	Yes. off course
Dudhal Nilam Dnyandeo	16561	Exemplary	Exemplary	Exemplary	Better	Exemplary	Exemplary	Exemplary	Excellent <input type="checkbox"/>	Yes
TEJAS CHANDRAKAN T BELDAR	16570	Better	Better	Better	Better	Better	Better	Better	Better	Yes
Nikam Harshada sanjay	16566	Good	Good	Better	Good	Good	Better	Good	Good	Yes
SAYYAD JASMIN MAHEBUB	16552	Better	Better	Better	Better	Better	Better	Better	Excellent	Yes
Pandhare Swarda Rajendra	16565	Exemplary	Exemplary	Better	Exemplary	Exemplary	Better	Exemplary	Good	Yes
ngtap sourabh	16564	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Good	Yes helpful



suresh																				
Shrutika Dilip Shinde	16569	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Good	Yes	
Vidya Anil Ghanwat	16562	Good	Good	Good	Good	Better	Better	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Yes helpful	
SONWALKAR NIKITA RAJENDRA	16563	Exemplary	Better	Better	Better	Better	Better	Better	Better	Better	Better	Better	Better	Better	Better	Good	activity	Yes		
Nayana Kishor Sonawane	16557	Exemplary	Better	Exemplary	Good	Better	Better	Exemplary	Better	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Best	Yes		
Anjali Satish kucheekar	16556	Exemplary	Good	Better	Better	Good	Good	Good	Good	Better	Good	Better	Good	Good	Good	Good	Good	Yes very helpful		
Ghodake Nikita Dilip	16551	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Excellent	Yes		
Kamble Pratiksha Dayanand	16558	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Best	Yes		
Markad Priyanka Prakash	16568	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Very good	Yes		
Thorave Abhishhek kisan	16567	Average	Average	Average	Average	Average	Average	Average	Average	Average	Average	Average	Average	Average	Average	Average	Very good	Yes		
Komal Balu Chaudhari	16555	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	Exemplary	good	Yes, it's useful		

DEPARTMENT OF BOTANY

*Madd*

*[Signature]*  
 Head,  
 Department of Botany  
 Jalaram Chaturchand College  
 Baramati (Dist. Pune)



**“5 Days Hands On Training Programme on Advanced Instrumentation Techniques”**

**Under ED cell**

(2<sup>nd</sup> to 7<sup>th</sup> Feb. 2024, Time 11.30 a.m to 3. 00 p.m)

**(Academic Year : 2023-24)**

**Speakers Bank details**

Sr. No	Name and Bank details	Remuneration
1	Name: Prof. S. R. Kale Branch Name: Bank of Maharashtra IFSC code- MAHM0000073 A/C number:20100397649	1000/-
2	Name: Dr. Y. N. Indulkar Branch Name: Bank of Maharashtra IFSC code- MAHM0000073 A/C number: 20063078124	1000/
3	Name: Dr. R. S. Bhondwe Branch Name Axis bank Baramati IFSC code- UTIB0000135 A/C number:918010091374045	1000/
4	Name: Prof. G. D. Pirale Branch Name: Axis bank Baramati IFSC code- UTIB0000135 A/C number:918010091388329	500/
5	Name: Prof. G. S. Bhunje Branch Name: Axis Bank Baramati IFSC code- UTIB0000135 A/C number:918010091380260	500/
6	Name: Dr. N. C. Dige Branch Name: SBI Patan IFSC code- SBIN0001372 A/C number:00000031928332024	500/
7	Name:Dr. M. P. Patil Ac. no.: 60335360364 Bank Name: Bank of Maharashtra: Bhigwan Chowk, Baramati IFSC code: MAHB0000073 MICR code:413014101	1000/-

