



R. C. Patel Educational Trust's  
**R. C. Patel Arts, Commerce and Science College**  
Shirpur-425405, Karvand Naka, Dist.- Dhule (Maharashtra)  
E-mail - principal@rcpasc.ac.in

**Affiliated to: K. B. C. North Maharashtra University, Jalgaon-425001**

## **Self Study Report (SSR): 2024 (4<sup>th</sup> Cycle)**



**Criteria - 2**  
**Teaching- Learning and Evaluation**

**Key Indicator - 2.3**  
**Teaching- Learning Process**

**Metric No. - 2.3.1 (QIM)**  
Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences and teachers use ICT- enabled tools including online resources for effective teaching and learning process

**Submitted to**  
**National Assessment and Accreditation Council, Bangalore**



R. C. Patel Educational Trust's

**R. C. Patel Arts, Commerce and Science College**

Karvand Naka, Shirpur 425405, Dist - Dhule, Maharashtra

☎: (02563) 299328

E-mail: principal@rcpasc.ac.in

**President**

Hon. Bhupeshbhai Patel

**Principal**

Dr. D. R. Patil

**Date:** 15/06/2024

## Declaration

This is to declare that, the information, reports, true copies of the supporting documents, numerical data etc. submitted in these files is verified by Internal Quality Assurance Cell (IQAC) and it is correct as per the office record.

This declaration is for the purpose of NAAC accreditation of the HEI for the 4<sup>th</sup> cycle assessment period 2018-19 to 2022-23.

**Place:** Shirpur

**Date:** 15/06/2024

**Dr. Sandip P. Patil**

**IQAC Co-ordinator**

**IQAC Coordinator**

R. C. Patel Educational Trust's

R. C. Patel Arts, Commerce and Science College

Shirpur, Dist.-Dhule (M.S.) 425405



**Dr. D. R. Patil**

**IQAC Chairman & Principal**

**PRINCIPAL**

R. C. Patel Educational Trust's

R. C. Patel Arts, Commerce and Science College

Shirpur, Dist.-Dhule (M.S.) 425405

## INDEX

Sr. No.	Particulars	Page No.
<b>1.</b>	<b>Department of Physics</b>	<b>3 - 78</b>
	1.1 Experiential Learning	5 – 38
	1.2 Participative Learning	39 – 52
	1.3 Problem Solving	53 - 77
	1.4 ICT	78 - 80
<b>2.</b>	<b>Department of Electronics</b>	<b>81 - 99</b>
	2.1 Experiential Learning	83 - 92
	2.2 Participative Learning	93 - 95
	2.3 Problem Solving	96 - 96
	2.4 ICT	97 - 99
<b>3.</b>	<b>Department of Mathematics</b>	<b>100 - 132</b>
	3.1 Experiential Learning	102 - 111
	3.2 Participative Learning	112 - 131
	3.3 ICT	132 - 132
<b>4.</b>	<b>Department of Botany</b>	<b>133 - 153</b>
	4.1 Experiential Learning	135 - 148
	4.2 Participative Learning	149 – 151
	4.3 Problem Solving	152 - 152
	4.4 ICT	153 - 153
<b>5.</b>	<b>Department of Zoology</b>	<b>154 - 183</b>
	5.1 Experiential Learning	156 - 180

	5.2 ICT	181 - 183
<b>6.</b>	<b>Department of Chemistry</b>	<b>184 - 235</b>
	6.1 Experiential Learning	186 - 202
	6.2 Participative Learning	203 - 210
	6.3 Problem Solving	211 - 233
	6.4 ICT	234 - 235
<b>7.</b>	<b>Department of Computer Science</b>	<b>236 - 252</b>
	7.1 Experiential Learning	238 - 250
	7.2 ICT	251 - 252
<b>8.</b>	<b>Department of Microbiology &amp; Biotechnology</b>	<b>253 - 305</b>
	8.1 Experiential Learning	255 – 290
	8.2 Participative Learning	291 – 296
	8.3 Problem Solving	297 – 301
	8.4 ICT	302 - 305



**Department  
of  
Physics  
&  
Electronics**

**Student Centric Learning (Pedagogies Used)**

**Department of Physics & Electronics**

**Pedagogy used for Teaching –**

Participatory Learning, Classroom Teaching, Interactive Sessions and Cutting-Edge Practice, Blended Learning, Flipped classroom.

**Tools and Materials used-**

- a. Blackboard or whiteboard
- b. Projectors.
- c. Computers for practical demonstrations
- d. PPTs.
- e. Teaching and learning resources- Reference Books /Text books, other references, films, radio programs, multimedia, digital learning resources including video, audio , animation and images, expert lectures
- f. Software used- MS Visio, Programming software, etc.

**Description of the Methods -**

- a. Teaching methods are the broader techniques used to help students achieve learning outcomes, while activities are the different ways of implementing these methods.
- b. Practical Work: all teaching and learning activities in the sciences in which the student is actively involved and that allow the mobilization of science processes skills and scientific knowledge and that may be materialized by paper and pencil activities or observing and/or manipulating materials.

**Outcomes (Learning Experience) -**

- 1: A strong sense of identity
- 2: Connection to and contribution with their world.
- 3: A strong sense of wellbeing.
- 4: Confident and involved learners.
- 5: Soft skills.
- 6: Learning Computers & Management allows students to learn about the Programming concepts and gain skills as logical & critical thinking, problem-solving, management skills.

## Experiential Learning

Academic Year	Sr. No.	Method used	Content
2018-19	1.	Project Work	T.Y.B.Sc. and M.Sc. Project Work

### Project Work

  
R.C.PATEL EDUCATIONAL TRUST  
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**R. C. Patel Arts, Commerce & Science College**  
**Shirpur, Dist. Dhule (M.S)**

**CERTIFICATE**  
**Department of Physics**

**This is to certified that Miss. Patil Dhanashri Mahendra**  
**Has satisfactorily carried out project work entitled "Preparation and Optical**  
**Properties of PbS Thin Films by CBD Method" for the degree of B.Sc. in physics**  
**as laid down by North Maharashtra University,**  
**Jalgaon during Academic Year 2018-19.**

**Internal Examiner**  
  
20/3/19

**Project Guide**  
Dr. A. M. Patil  


**External Examiner**  
  
20/3/19

**College seal**  
**Head**  
*Department of Physics*  
*R. C. Patel Arts, Com. & Sci. College*  
*Shirpur, Dist. Dhule*

**Head**  
Department of Physics  
R.C.Patel ASC College, Shirpur  


2

## Project Work



R. C. Patel Arts, Commerce & Science College

Shirpur, Dist. Dhule (M.S)

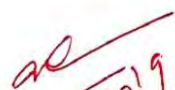
### CERTIFICATE

Department of Physics

This is to certified that Miss. Bagul Chetana Subhash


Has satisfactorily carried out project work entitled "**Preparation and Optical Properties of PbS Thin Films by CBD Method**" for the degree of B.Sc. in physics as laid down by North Maharashtra University,

Jalgaon during Academic Year 2018-19.

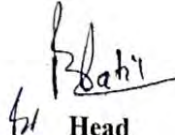
  
Internal Examiner  
20/5/2019



College seal

  
Project Guide  
Dr. A. M. Patil

  
External Examiner  
20/5/2019

  
Head  
Department of Physics  
R.C.Patel ASC College, Shirpur  
Shirpur, Dist. Dhule

### T.Y.B.Sc. Project List 2018-19

Sr. No.	Name of Students	Project Title	Name of Project Guide
1.	Bagul Chetana Subhash	Preparation and optical properties of Pbs Thin films by CBD method	Dr. A. M. Patil
2.	Chaudhari Lokesh Sudhakar	Velocity of sound in various liquid using Ultrasonic Interferometer.	Dr. H. B. Patil
3.	Chavan Harshada Chhotu	Synthesis and optical properties of Cadmium Sulfide Thin films using Chemical bath Deposition method.	Dr. H. B. Patil
4.	Dorik Sonali Bajirao	Synthesis and optical properties of Cadmium Sulfide Thin Films Using Chemical Bath Deposition Method.	Dr. H. B. Patil
5.	Girase Charusmita Umeshsing	Pinhole Diffraction by LASER.	Dr. A. M. Patil
6.	More Darshana Abhiman	Synthesis and Characterization of Silver Nanoparticles.	Dr. H. B. Patil
7.	Patil Bhumika Mahendra	Solar cell Characteristics using Solar Simulator.	Dr. A. M. Patil
8.	Patil Dhanashri Mahendra	Preparation and Optical properties of PbS thin Films by CBD Method.	Dr. A. M. Patil
9.	Patil Dipesh Sambhaji	Velocity of sound in various Liquid using Ultrasonic Interferometer.	Dr. A.M. Patil
10.	Patil Kirtimala Nanasaheb	Synthesis and Characterization of Silver nanoparticle.	Dr. H. B. Patil
11.	Patil Pragati Dagdu	Effect of Dopant Ions on Polyaniline.	Dr. A. M. Patil
12.	Pawar Namrata Sanjay	Synthesis and Characterization of Cds thin films.	Dr. H. B. Patil
13.	Rajput Gayatribai Govindsing	Solar cell Characteristics using Solar Simulator.	Dr. A. M. Patil
14.	Saner Arati Ashok	Synthesis and Characterization of Silver Nanoparticles.	Dr. A. M. Patil
15.	Suryawanshi Priyanka Vijay	Synthesis and Characterization of Pds thin films.	Dr. A. M. Patil

*A. Patil*

**Dr. A. M. Patil**  
**HOD**

**Department of Physics & Electronics**



### M.Sc. Project List 2018-19

Sr. No.	Name of students	Project Title	Name of Project Guide
1.	Ahirrao Bhagyesh Pradip	Comparative study of C and X Band Microwave Frequencies of Soils.	Dr. A. A. Patil
2.	Bhamare Mayuri Sanjay	Dielectric Properties and Loss of a Material at X-Band Microwave Frequencies.	Dr. H. B. Patil
3.	Bonde Chetana Satish	Atomic Objective Counter	Prof. H. B. Patil
4.	Borse Manoj Bhimrao	Synthesis and Optical Properties of $Pb_xCd_{1-x}S$ thin films.	Dr. A. A. Patil
5.	Chaudhari Kavita Keshav	Synthesis & optical Properties of Lead Sulfide Thin Films Using Chemical Bath Deposition Method	Dr. A. M. Patil
6.	Chavan Damini Raman	Synthesis and Characterization of $PbCdS$ thin Films.	Dr. A. M. Patil
7.	Dorik Ashwini Ravindra	Synthesis of $H_3PO_4$ doped polyaniline	Dr. A. M. Patil
8.	Dorik Yogita Shantaram	Synthesis of HCL doped polyaniline	Dr. A. M. Patil
9.	Girase Bhagyashri Prakash	Synthesis and Characterization of CDS Thin films using chemical bath deposition	Dr. H. B. Patil
10.	Girase Shivani Bharatsing	Synthesis and Characterisation of GO PANI and GO-PANI Composite”	Dr. A. M. Patil
11.	Jadhav Neha Rajendra	Automatic Street Light.	Mr. K. M. Sarode
12.	Jadhav Prashant Rajendra	Scattering and Emissive behaviour of solids at C-Band Microwave Frequencies	Mr. K. M. Sarode
13.	Kasar Vrushali Bhanudas	Synthesis of $H_3PO_4$ doped polyaniline	Dr. A. M. Patil
14.	Mankani Mona Mukesh	Comparative study of C and X Band Microwave Frequencies of Soils.	Dr. A. A. Patil
15.	Manyar Shaikh Danish Shaikh Nayim	Dielectric Properties and Loss of a Material at X-Band Microwave Frequencies.	Dr. A. A. Patil
16.	More Ruchita Hari	Atomic Objective Counter	Dr. A. A. Patil
17.	Patil Meena Jagannath	Synthesis and optical properties of Cadmium sulfide Thin films using Chemical Bath Deposition method.	Dr. H. B. Patil

18.	Patil Roshani Rajendra	Dielectric and emissive properties of solid at X- band Microwave Frequencies.	Dr. A. A. Patil
19.	Patil Sachin Jagannath	Synthesis of HCL doped Polyaniline	Mr. K. M. Sarode
20.	Patil Shital Ravindra	Study of Photocatalytic activity of Zno nanoparticle	Mr. H. P. Suryawanshi
21.	Pawar Runal Rajendra	Dielectric Behaviour & Scattering Coefficient of Material at C-Band Microwave Frequencies	Mr. H. B. Patil
22.	Saner Yogesh Bhalchandra	Synthesis of Fe <sub>2</sub> O <sub>3</sub> thin film by using CBD Method.	Dr. A. M. Patil
23.	Shaikh Nida Aafreen Raeesoddin	Synthesis of ZnO nanorod array on spin coated seed layer using hydrothermal method	Mr. H. P. Suryawanshi
24.	Shimpi Pratibha Eknath	Dielectric Behaviour & Scattering Coefficient of Material at C-Band Microwave Frequencies	Dr. A. A. Patil
25.	Shirsath Murlidhar Sitaram	Synthesis and Characterisation of GO PANI and GO-PANI Composite	Dr. A. M. Patil
26.	Sonawane Jayashri Madan	Synthesis and Optical properties of CDS Thin film	Dr. A. M. Patil
27.	Yadav Vishakha Vijay	ZnO Seed layer Deposition on Quartz Glass Substrate using Spin Coating Method	Mr. H. P. Suryawanshi

*A. Patil*

**Dr. A. M. Patil**  
**HOD**

**Department of Physics & Electronics**





## Project Work



Academic Year	Sr. No.	Method used	Content
2019-20	1.	Project Work	T.Y.B.Sc. and M.Sc.

## Project Work



R. C. Patel Educational Trust's

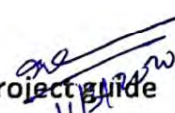
R. C. Patel Arts, Commerce & Science College

Shirpur, Dist. Dhule( M.S.)

## CERTIFICATE

### Department of Physics

This is certified that BHAVASAR SAYALI ANIL has satisfactorily carried out project work entitled "**Synthesis and Optical Properties of Copper Sulfide**" for the degree of B.Sc. in physics as laid down by North Maharashtra University, Jalgaon during Academic Year 2019-20

  
Project guide

Dr. H.B.Patil



College seal

  
fw

Head department  
**Head**

**Department Of Physics**  
R.C.Patel Arts, Comm. & Sci. College  
Shirpur, Dist. Dhule 425 405

External Examiner

Internal Examiner

**Project Work**



### T.Y.B.Sc. Project List 2019-20

Sr. No.	Name of students	Project Title	Name of Project Guide
1.	Acharya Bhushan Ganesh	Pinhole Diffraction by Laser	Dr. A. A. Patil
2.	Bhadane Bhumika Bhika	Preparation & Optical Properties of PbS Thin Films	Dr. A. M. Patil
3.	Bhadoriya Smita Sanjaysinh	Synthesis & Characterization of Silver Nanoparticles	Dr. H. B. Patil
4.	Bhavsar Sayali Anil	Synthesis and optical properties of copper sulphide thin films using chemical Bath deposition method.	Dr. H. B. Patil
5.	Chaudhari Tushar Nimba	Synthesis & Characterization of PbCdS by Flux Method	Dr. A. M. Patil
6.	Chavan Ankita Upendra	Synthesis & Optical Properties of Cadmium Sulphide	Dr. A. M. Patil
7.	Chavan Yogita Minesh	Ultrasonic Velocity in Liquid	Dr. H. B. Patil
8.	Deore Rajshree Pralhad	Energy Transformation	Dr. A. A. Patil
9.	Gosavi Damini Kashinathpuri	Velocity of sound in various liquid using Ultrasonic interferometer.	Dr. H. B. Patil
10.	Gosavi Punam Parmeshwar	Preparation & Optical Properties of PbS Thin Films	Dr. A. M. Patil
11.	Gujar Bharati Ravindra	Solar Cell Characteristics Using Solar Simulator	Dr. A. M. Patil
12.	Jadhav Dhanashri Sanjay	Synthesis & Characterization of Silver Nanoparticles	Dr. H. B. Patil
13.	Koli Yogeshwari Jitendra	Synthesis and optical properties of copper sulphide thin films using chemical Bath deposition method	Dr. H. B. Patil
14.	Mali Jitendra Prabhakar	Synthesis & Characterization of PbCdS by Flux Method	Dr. A. M. Patil
15.	Patil Ashwini Jitendra	Synthesis & Optical Properties of Cadmium Sulphide	Dr. A. M. Patil
16.	Patil Ashwini Nimbaji	Ultrasonic Velocity in Liquid	Dr. H. B. Patil
17.	Patil Dhanashri Ravindra	Energy Transformation	Dr. A. A. Patil
18.	Patil Divya Anil	Laser & its Applications	Dr. A. A. Patil
19.	Patil Harshada Mansaram	Rain Level Sensor	Dr. A. A. Patil
20.	Patil Jagruti Ratilal	Synthesis of H <sub>2</sub> SO <sub>4</sub> doped polyaniline	Dr. A. M. Patil
21.	Patil Jayashree Manohar	Velocity of Sound in Various Liquid Using Ultrasonic Interferometer	Dr. H. B. Patil
22.	Patil Krutika Vishvas	Preparation & Optical Properties of PbS Thin Films by CDS Method	Dr. A. M. Patil
23.	Patil Paresh Yogendra	Synthesis and optical properties of Cadmium Sulphide Thin films using	Dr. A. M. Patil

		Chemical bath Deposition method.	
24.	Patil Rita Tukaram	Synthesis and Characterization of Silver Nanoparticles	Dr. H. B. Patil
25.	Patil Sneha Prakash	Effect of Dopant Ions on Polyaniline	Dr. A. A. Patil
26.	Pawara Chetan Shildar	Energy Transformation	Dr. A. A. Patil
27.	Rane Nitin Khushal	Laser & its Applications	Dr. A. A. Patil
28.	Salunkhe Sunita Upendra	Rain Level Sensor	
29.	Sayyad Arzoo Bano Sayyad Zakir	Synthesis of H <sub>2</sub> SO <sub>4</sub> doped polyaniline	Dr. A. M. Patil
30.	Sayyad Uzma Parveen Ashfaque Ali	Velocity of Sound in Various Liquid Using Ultrasonic Interferometer	Dr. H. B. Patil
31.	Shimpi Tejswini Ravindra	Preparation & Optical Properties of PbS Thin Films by CDS Method	Dr. A. M. Patil
32.	Sisode Bhavika Dilip	Synthesis and optical properties of Cadmium Sulphide Thin films using Chemical bath Deposition method.	Dr. A. M. Patil
33.	Sonar Kishor Ravindra	Synthesis and Characterization of Silver Nanoparticles	Dr. H. B. Patil
34.	Sonawane Nisha Dhanraj	Effect of Dopant Ions on Polyaniline	Dr. A. A. Patil
35.	Pawara Gendya Kailas	Pinhole diffraction by Laser	Dr. A. A. Patil

*A. Patil*

**Dr. A. M. Patil**  
**HOD**  
**Department of Physics & Electronics**



### M.Sc. Project List 2019-20

Sr. No.	Name of students	Project Title	Name of Project Guide
1.	Ahire Chetan Purushottam	Synthesis & Characterization of PbCdS by Flux Method	Dr. A. M. Patil
2.	Borse Aniket Shekhar	Structural Properties of CdS Solid Solution by Flux Method	Dr. A. M. Patil
3.	Chaudhari Kaveri Ashok	Effect of Dopant Ions on Polyaniline	Mr. K. M. Patil
4.	Chavan Bhakti Mahesh	Synthesis & Characterization of PbS Thin Films	Dr. A. M. Patil
5.	Chavan Pranali Suresh	Polar Photo catalytic Activity of Hydrothermal synthesis of TiO <sub>2</sub>	Mr. K. M. Patil
6.	Danej Shivam Nandkumar	Synthesis & Characterisation of PbCdS Thin Films	Dr. A. M. Patil
7.	Desale Jagruti Sanjay	Synthesis & Characterisation of PbCdS Thin Films	Dr. A. M. Patil
8.	Gosavi Vivek Ravindra	Synthesis of Fe <sub>2</sub> O <sub>3</sub> Thin Films by Using CBD Method	Dr. A. M. Patil
9.	Kadam Divyabharati Bhatu	Preparation & Optical Properties of Fe <sub>2</sub> O <sub>3</sub> Thin Films by Using CBD Method	Dr. A. M. Patil
10.	Mali Rupali Ananda	Synthesis of Fe <sub>2</sub> O <sub>3</sub> Thin Films by Using CBD Method	Dr. A. M. Patil
11.	Mirza Amreen Saba Shakil Baig	Study the Structural Properties of TiO <sub>2</sub> Nanoparticles by Green Synthesis Method	Dr. A. M. Patil
12.	Patil Mahesh Vilas	Study of Dielectric Properties of Soils at X-Band Microwave Frequencies	Dr. A. A. Patil
13.	Patil Milind Anil	Synthesis & Characterization of PbCdS by Flux Method	Dr. A. M. Patil
14.	Patil Neekita Laxman	Structural Properties of CdS Solid Solution by Flux Method	Dr. A. M. Patil
15.	Patil Priyanka Amrut	Effect of Dopant Ions on Polyaniline	Mr. K. M. Patil
16.	Patil Puja Mangesh	Synthesis & Characterization of PbS Thin Films	Dr. A. M. Patil
17.	Patil Vaibhav Chandrashekhar	Polar Photo catalytic Activity of Hydrothermal synthesis of TiO <sub>2</sub>	Mr. K. M. Patil
18.	Pawar Vaibhavi Ishwar	Synthesis & Characterisation of PbCdS Thin Films	Dr. A. M. Patil
19.	Saner Gayatri Sanjay	Synthesis & Characterisation of PbCdS Thin Films	Dr. A. M. Patil
20.	Savale Priyanka Babu	Synthesis of Fe <sub>2</sub> O <sub>3</sub> Thin Films by Using CBD Method	Dr. A. M. Patil
21.	Shaikh Altaf Hussain Akhtar Hussain	Preparation & Optical Properties of Fe <sub>2</sub> O <sub>3</sub> Thin Films by Using CBD	Dr. A. M. Patil



		Method	
22.	Shaikh Saima Kaosar Sk Farooque	Synthesis of Fe <sub>2</sub> O <sub>3</sub> Thin Films by Using CBD Method	Dr. A. M. Patil
23.	Sonawane Umesh Santosh	Study the Structural Properties of TiO <sub>2</sub> Nanoparticles by Green Synthesis Method	Dr. A. M. Patil
24.	Upadhyay Shweta Rameshwar	Study of Dielectric Properties of Soils at X-Band Microwave Frequencies	Dr. A. A. Patil

*A. M. Patil*

**Dr. A. M. Patil**  
**HOD**

**Department of Physics &**



**Electronics**



Academic Year	Sr. No.	Method used	Content
2020-21	1.	Project Work	T.Y.B.Sc. and M.Sc.

### Project Work



### T.Y.B.Sc Project List 2020-21

Sr. No	Name of students	Project Title	Name of Project Guide
1.	Aakhadmal Sonali Jivan	Ultrasonic Velocity in liquid	Dr. H. B. Patil
2.	Chaudhari Damini Ashok	Solar Stimulator (Solar Cell Characterization Unit)	Dr. A. M. Patil
3.	Deore Sakshi Nimbajirao	Photo catalytic activity of P25-Tio <sub>2</sub> powder for the degradation rate of methylene blue	Dr. A. M. Patil
4.	Gujar Harshada Gopal	ZnO seed layer Deposition on Quartz Glass Substrate using Drop Casting Method	Dr. H. B. Patil
5.	Gujar Rajashree Chhagan	Rain level Sensor	Dr. A. A. Patil
6.	Jain Poonam Pratapmal	Solar cell characteristics using solar stimulator	Dr. A. M. Patil
7.	Karankal Priyanka Naresh	Dielectric behaviour and emission properties of soils at microwave frequencies	Dr. A. A. Patil
8.	Kazi Ataurrehman Ezaz Ahmed	Scattering properties of soils at microwaves frequencies	Dr. A. A. Patil
9.	Patil Kanchan Kantilal	Laser and its application	Dr. A. A. Patil
10.	Patil Nita Kishor	The Hall Effect of (Ge) Crystal	Dr. H. B. Patil
11.	Patil Priyanka Santosh	Around based automatic plant irrigation system	Dr. A. M. Patil
12.	Rajput Karina Chhatrapal	Structural properties of CdS solid solution by flux method	Dr. A. M. Patil
13.	Rajput Ratnadip Preamsing	Water Level Indicator	Mr. A.C.Bhavsar
14.	Rajput Vrushalidevi Vijaysing	Synthesis and optical properties of Lead Sulphide Thin Film using CBD method	Dr. A. M. Patil
15.	Shirsath Neha Amrut	Ultrasonic Velocity in liquid	Dr. H. B. Patil
16.	Shirsath Manisha Kailas	Scattering properties of soils at microwaves frequencies	Dr. A. A. Patil
17.	Shirsath Nutan Shravan	Water Level Indicator	Dr. A. M. Patil
18.	Solanki Gayatri Jagadish	Synthesis and characterization of CdS by Flux method	Dr. A. M. Patil
19.	Wagh Mayuri Shashikant	Around based automatic plant irrigation system	Dr. H. B. Patil
20.	Bari Jagruti Parshuram	The Hall Effect of (Ge) Crystal	Dr. H. B. Patil
21.	Bhamare Devendra Vijay	Pinhole diffraction by LASER	Mr.A. C. Bhavsar
22.	Bhavsar Rachana Chandrashekhar	Laser and its application	Mr.A. C. Bhavsar

23.	Bhavsar Sakshi Chandrashekhar	Synthesis and optical properties of Lead Sulphide Thin Film using CBD method	Dr. A. M. Patil
24.	Borase Umeshwari Bhausahab	Structural properties of CdS solid solution by flux method	Dr. A. M. Patil
25.	Chaudhari Jayashri Ratilal	Pinhole diffraction by LASER	Mr. A. C. Bhavsar
26.	Chaudhari Neha Rajendra	Synthesis and characterization of PbS by Flux method	Dr. A. M. Patil
27.	Chavan Priyanka Suresh	Synthesis and Characteristics of Silver Nanoparticles	Dr. H. B. Patil
28.	Dhangar Komalika Bhika	Synthesis and characterization of PbS by Flux method	Dr. A. M. Patil
29.	Gavali Priya Rajendra	Solar cell characteristics using solar stimulator	Dr. A. M. Patil
30.	Girase Kalpesh Vijaysing	ZnO seed layer Deposition on Quartz Glass Substrate using Drop Casting Method	Dr. A. M. Patil
31.	Kulkarni Piyusha Ghanshyam	Preparation and Optical properties of PbS thin films by CBD method	Dr. A. M. Patil
32.	Mali Tejaswini Prakash	Velocity of sound in various liquid using Ultrasonic Interferometer	Dr. H. B. Patil
33.	Nikumbh Antara Sunil	Photo catalytic activity of P25-Tio2 powder for the degradation rate of methylene blue	Dr. A. M. Patil
34.	Nikumbh Muktabai Aananda	Synthesis and characterization of Pbs by Flux method	Dr. A. M. Patil
35.	Padmar Jayshree Subhash	Scattering and Emission behaviour of soils at C-Band Microwave Frequencies	Dr. A. A. Patil
36.	Pathak Ankita Anant	Synthesis and Characteristics of Silver Nanoparticles	Dr. H. B. Patil
37.	Patil Chetan Milind	Synthesis of H <sub>3</sub> PO <sub>4</sub> doped polyaniline	Dr. A. M. Patil
38.	Patil Pratiksha Anil	Synthesis of ZnO nanorod array on spin coated seed layer using hydrothermal method	Dr. A. M. Patil
39.	Patil Sneha Gulabrao	Preparation and Optical properties of PbS thin films by CBD method	Dr. A. M. Patil
40.	Patil Vaishnavi Uday	Solar Stimulator (Solar Cell Characterization Unit)	Dr. A. M. Patil

41.	Pawara Arvind Radheshyam	Synthesis and characterization of CdS by Flux method	Dr. A. M. Patil
42.	Rajput Jayesh Jitendra	Scattering and Emission behaviour of soils at C-Band Microwave Frequencies	Dr. A. A. Patil
43.	Salunke Dipali Vikram	Velocity of sound in various liquid using Ultrasonic Interferometer	Dr. H. B. Patil
44.	Sonawane Yashshri Gunvantrao	Synthesis of ZnO Nano rod array on spin coated seed layer using hydrothermal method	Dr. A. M. Patil
45.	Vasave Mangesh Ranjeet	Dielectric behaviour and emission properties of soils at microwave frequencies	Dr. A. A. Patil
46.	Wadile Punam Bhagwan	Synthesis of H <sub>3</sub> PO <sub>4</sub> doped polyaniline	Dr. A. M. Patil

*A. Patil*

**Dr. A. M. Patil**  
**HOD**

**Department of Physics & Electronics**



### M.Sc. Project List 2020-21

Sr. No.	Name of student	Project Title	Name of Project Guide
1.	Badgular Shubhangi Dipak	Automatic Street light	Dr. H. B. Patil
2.	Baghwan Awais Yusuf	Ultrasonic Velocity in Liquid	Dr. H. B. Patil
3.	Bagul Chetana Subhash	Synthesis and characterization of Cds Thin films	Dr. A. M. Patil
4.	Chaudhari Lokesh Sudhakar	Synthesis of HCl doped polyaniline	Dr. A. M. Patil
5.	Desale Manjusha Dhananjay	Solar Photo catalytic activity of Hydrothermal synthesis of TiO <sub>2</sub>	Dr. A. M. Patil
6.	Dorik Sonali Bajirao	Synthesis and Characterization of PbCdS thin films.	Dr. A. M. Patil
7.	Kulkarni Kushal Ramkrushna	Synthesis and optical properties of cadmium sulphide thin films using chemical Bath deposition method	Dr. A. M. Patil
8.	Pardeshi Bhagyashri Bhagwan	Synthesis and Characterization of PbCdS by flux method	Dr. A. M. Patil
9.	Parjane Priyanka Dinkar	Ultrasonic Velocity in Liquid	Dr. H. B. Patil
10.	Patil Dhanashri Mahendra	Structural properties of Cds solid solution by Flux method	Dr. A. M. Patil
11.	Patil Pragati Dagdu	Synthesis and Characterization of PbCdS thin films.	Dr. A. M. Patil
12.	Patil Priti Kailas	Structural properties of Cds solid solution by Flux method	Dr. A. M. Patil
13.	Pawar Namrata Sanjay	Study of Photo catalytic activity of Zno nanoparticle.	Dr. H. B. Patil
14.	Quaxi Saimeen Firdous Mehruzzama	Synthesis and Characterization of PbCdS by flux method	Dr. A. M. Patil
15.	Rajput Gayatribai Govindsing	Study of Photo catalytic activity of Zno nanoparticle	Dr. H. B. Patil
16.	Salunke Leena Milind	Ultrasonic Velocity in Liquid	Dr. H. B. Patil
17.	Shirsath Rahul Ashok	Synthesis and optical properties of cadmium sulphide thin films using	Dr. A. M. Patil

		chemical Bath deposition method	
18.	Sonar Lokesh Dagdu	Distance and Size Measuring by Image	Dr. A. M. Patil
19.	Sonawane Priyanka Bhikaji	Quantum Entanglement "Spooky Action at a Distance"	Dr. A. M. Patil
20.	Suryawanshi Harshali Deepak	Solar Photo catalytic activity of Hydrothermal synthesis of TiO <sub>2</sub>	Dr. A. M. Patil
21.	Tayde Shital Daulat	Study of Photo catalytic activity of ZnO nanoparticle.	Dr. H. B. Patil
22.	Wagh Dhiraj Dnyaneshwar	Synthesis of HCl doped polyaniline	Dr. A. M. Patil
23.	Juveriyatabassumbint Mohammadisrafil	Energy Transformation	Dr. A. M. Patil

*A. Patil*

**Dr. A. M. Patil**  
**HOD**  
**Department of Physics &**



**Electronics**

**Project Work**



R. C. Patel Educational Trust's

R. C. Patel Arts, Commerce & Science College

Shirpur, Dist. Dhule.

CERTIFICATE

Department of Physics

This is to certified that **Tele Asmita Arun**

Has satisfactorily carried out project work entitled "**Synthesis  
And Structural Properties of GO, PANI and GO-PANI Composite**" for the  
degree of B.Sc. in physics as laid down by Kaviyatri Bahinabai Chaudhari  
North Maharashtra University,  
Jalgaon during Academic Year 2021-22.

Internal Examiner



Project Guide  
Dr.A.M.Patil

External Examiner

for Head  
Department of Physics  
R.C.Patel ASC College, Shirpur



## Project Work



### T.Y.B.Sc. Project List 2021-22

Sr. No.	Name of students	Project Title	Name of Project Guide
1.	Savale Shubham Ravindra	Synthesis and Optical properties of Zns thin films	Mr. K. R. Pawar
2.	Patil Madhuri Kailas	Synthesis and optical properties of Lead Sulphide Thin films grown by chemically Bath Deposition Method	Dr. H. B. Patil
3.	Badgujar Komal Bhatu	Synthesis of Fe <sub>2</sub> O <sub>3</sub> thin films by CBD Method	Mrs. K. M. Patil
4.	Chaudhari Sonali Ramesh	Synthesis and Optical properties of Fe <sub>2</sub> O <sub>3</sub> Thin film	Mrs. K. M. Patil
5.	Gawale Kajal Yashwant	Synthesis and optical properties of Lead Sulphide Thin films grown by chemically Bath Deposition Method	Dr. H. B. Patil
6.	Mali Manisha Mahendra	Synthesis and optical properties of Copper Sulphide Thin films using Chemical Bath Deposition method	Dr. H. B. Patil
7.	Patil Bhagyashri Madhukar	Preparation and optical properties of Fe <sub>2</sub> O <sub>3</sub> thin films by using CBD method	Mrs. K.M. Patil
8.	Patil Prajakta Dipak	Synthesis and Optical properties of Fe <sub>2</sub> O <sub>3</sub> Thin film	Mrs. K.M. Patil
9.	Patil Puja Ravindra	Synthesis of Fe <sub>2</sub> O <sub>3</sub> thin films by CBD Method	Mrs. K.M. Patil
10.	Patil Rajnandini Vilas	Synthesis and Characterisation of Cds By Flux Method	Dr. A. M. Patil
11.	Sonawane Ashwini Gokul	Synthesis and Optical properties of Pbs thin films	Ms. K. R. Pawar
12.	Thakare Ujjwala Pradip	Synthesis and optical properties of Pbs thin films	Ms. K. R. Pawar
13.	Borse Sakshi Kailas	Synthesis and Characterisation of GO PANI and GO-PANI Composite	Dr. A. M. Patil
14.	Mahajan Shubham Dinesh	Synthesis and Characterisation of GO PANI and GO-PANI Composite	Dr. A. M. Patil
15.	Patil Dipika Ashok	Synthesis and optical properties of Lead Sulphide Thin films grown by chemically Bath Deposition Method	Dr. H. B. Patil
16.	Patil Pawan Ravindra	Synthesis and optical properties of Cds thin films	Mr. K. R. Pawar
17.	Patil Pratik Atul	Synthesis and Characterisation of GO PANI and GO-PANI Composite	Dr. A. M. Patil
18.	Patil Priyanka Dilip	Synthesis and Structural Properties of Pbs solid solution Prepared by Flux Method	Dr. A. M. Patil
19.	Patil Tejal Hitendrasin	Synthesis and Structural Properties	Dr. A. M. Patil

		of Pbs solid solution Prepared by Flux Method	
20.	Pawar Vaishanavi Arvind	Synthesis and optical properties of Cadmium sulphide thin films using chemical Bath Deposition method	Dr. H. B. Patil
21.	Rajput Jyoti Kevalsing	Synthesis and Characterisation of Cds By Flux Method	Dr. A. M. Patil
22.	Sonawane Umesh Gokul	Synthesis and Optical properties of Zns thin films	Ms. K. R. Pawar
23.	Tele Asmita Arun	Synthesis and Characterisation of GO PANI and GO-PANI Composite	Dr. A. M. Patil
24.	Tiwari Dinesh Vijaykumar	Synthesis and optical properties of Cds thin films	Ms. K. R. Pawar
25.	Mali Devyani Dnyaneshwar	Synthesis and Characterisation of Cds By Flux Method	Dr. A. M. Patil
26.	Patel Dipmala Babulal	Study of Dielectric Behaviour of a Solid at Microwave Frequencies	Dr. A. A. Patil
27.	Kasar Paresh Ramlal	Single slit diffraction by LASER	Dr. A. M. Patil


*A. M. Patil*

**Dr. A. M. Patil**  
**HOD**  
**Department of Physics & Electronics**



### M.Sc. project list 2021-22

Sr. No.	Name of students	Project Title	Name of Project Guide
1.	Bagal Vedika Jagannath	“Synthesis and Structural Properties of PbS Solid Solution Prepared by Flux Method”	Dr. A. M. Patil
2.	Balsane Premsagar Suresh	“Single slit diffraction by LASER”	Dr. A. M. Patil
3.	Hadane Bhumika Bhika	“Synthesis and Optical properties of Lead Sulphide Thin Films Grown by Chemically Bath Deposition Method”	Dr. H. B. Patil
4.	Bhavsar Sayali Anil	“Synthesis and Optical Properties of $Pb_xCd_{1-x}S$ ( $0.05 < X < 0.25$ ) thin films”	Dr. A. M. Patil
5.	Chavan Ankita Upendra	“Synthesis and structural Properties of CdS Solid Solution Prepared by Flux Method”	Dr. A. M. Patil
6.	Chavan Yogita Manish	“synthesis and characterization of $Pb_xCd_{1-x}S$ ( $X=0.2, 0.4, 0.6, 0.8$ ) by Flux Method”	Dr. A. M. Patil
7.	Gosavi Punam Parmeshwar	“Synthesis and optical properties of Cds thin films”	Dr. H. B. Patil
8.	Jadhav Dhanashri Sanjay	“Temperature Dependent Band Gap in Cadmium Sulphide Thin films using Chemical Bath Deposition Method”	Dr. H. B. Patil
9.	Kokani Suny Dilip	“Synthesis and Optical properties of Zns thin films”	Ms. K. R. Pawar
10.	Marathe Neha Natthu	“Synthesis and Optical properties of Zns thin films”	Ms. K. R. Pawar
11.	Patil Shraddha Bhausahab	“Synthesis and characterization of CdS Solid Solution Prepared by Flux Method”	Dr. A. M. Patil
12.	Patil Ashwini Jitendra	“Time Dependent Band Gap in Cadmium Sulphide Thin Films Using Chemical Bath Deposition Method”	Dr. H. B. Patil
13.	Patil Ashwini Nimbaji	“synthesis and characterization of $Pb_xCd_{1-x}S$ ( $X=0.2, 0.4, 0.6, 0.8$ ) by Flux Method”	Dr. A. C. Patil
14.	Patil Dhanashri Ravindra	“Dye-Sensitized Solar Cell”	Dr. A. M. Patil
15.	Patil Jayshri Manohar	“Synthesis and optical properties of PbS Thin Films”	Ms. K. R. Pawar
16.	Patil Prajakta Dipak	“Synthesis and optical properties of Cds thin films”	Ms. K. R. Pawar
17.	Patil Pratiksha Jagdish	“Synthesis and optical properties of $Fe_2O_3$ Thin Films”	Dr. K. M. Patil
18.	Patil Sneha Prakash	“synthesis and characterization	Dr. A. C. Patil

		of $Pb_xCd_{1-x}S$ ( $X=0.2, 0.4, 0.6, 0.8$ ) by Flux Method”	
19.	Pawara Chetan Shildar	“Synthesis and Optical properties of ZnS thin films”	Ms. K. R. Pawar
20.	Pawara Manik Jagdish	“Synthesis and optical properties of $Fe_2O_3$ thin films”	Dr. K. M. Patil
21.	Rajput Mhini Yogendra	“Synthesis and optical properties of $Fe_2O_3$ thin films”	Dr. K. M. Patil
22.	Rajput Priyanka Dagesing	“Synthesis and characterization of PbS Solid Solution Prepared by Flux Method”	Dr. A. M. Patil
23.	Sayyed Aarzoo Bano Sayyed Zakir	“Synthesis and Optical Properties of $Pb_xCd_{1-x}S$ ( $0.05 < X < 0.25$ ) thin films”	Dr. A. M. Patil
24.	Shaikh Bushara Bi Moinoddin	“Study of Dielectric properties of a solids at Microwave Frequencies”	Dr. A. A. Patil
25.	Sisode Bhavika Dilip	“Synthesis and optical properties of Copper sulphide Thin films using Chemical Bath Deposition method”	Dr. H. B. Patil
26.	Sonawane Nisha Dhanraj	“Synthesis and Optical properties of Lead sulfide Thin films by Chemically Bath Deposition Method at Change in Complexing Agent”	Dr. H. B. Patil
27.	Bhadoriya Smita Sanjaysinh	“synthesis and characterization of $Pb_xCd_{1-x}S$ ( $X=0.2, 0.4, 0.6, 0.8$ ) by Flux Method”	Dr. A. C. Patil
28.	Koli Yogeshwari Jitendra	“Solar Simulator”(Solar Cell Characterization Unit)	Dr. H. B. Patil
29.	Patil Divya Anil	“Solar Simulator”(Solar Cell Characterization Unit)	Dr. H. B. Patil
30.	Pawara Shantiram Jayram	“Single slit diffraction by LASER”	Dr. A. M. Patil
31.	 bulal	“Dielectric Behaviour and Emissivity of a soil at Microwave Frequencies”	Dr. A. A. Patil

**Dr. A. M. Patil**

**HOD**

**Department of Physics & Electronics**



Academic Year	Sr. No.	Method used	Content
2022-23	1.	Project Work	T.Y.B.Sc. and M.Sc. 2
	2.	Industrial Visits	UG and PG

## Project Work

**CERTIFICATE**

This is to certify that the project report titled **“Dielectric and Scattering Properties of a Soil at X-Band Microwave Frequencies”** for M.Sc. (Physics) is a work carried out by Miss. Ankita Anant Pathak of M.Sc.. Physics of R.C.Patel Arts, Commerce and Science College, Shirpur, for fulfillment of M.Sc. course of KBC North Maharashtra University, Jalgaon under my supervision in the Department of Physics in the academic year 2022-23.

*Babil* 05/06/23  
Internal Examiner

*Vinayak* 05/06/2023  
External Examiner

*Dr.*  
Project Guide  
(Dr. Avinash A. Patil)

*Babil*  
**Head**  
Department Of Physics  
R.C.Patel Arts, Comm. & Sci. College  
Shirpur, Dist. Dhule 425 485  
Head

Date: 31/05/23  
Place: Shirpur



Project Work



R. C. Patel Educational Trust

R. C. Patel Educational Trust's  
R. C. Patel Arts, Commerce & Science College  
Shirpur, Dist. Dhule (M.S)

**CERTIFICATE**

Department of Physics

This is to certified that Miss. Valvi Yamuna Kella Has  
satisfactorily carried out project work entitled on  
"SYNTHESIS OF  $Fe_2O_3$  THIN FILMS BY USING CBD METHOD"

for the degree of M.Sc. in Physics as laid down by KBC North  
Maharashtra University,

Jalgaon during Academic Year 2022-23.

*Habil 06/06/23*  
External Examiner

*K. M. Patil*  
21/6/2023  
Project Guide  
Prof. K. M. Patil

*Dingani*  
06/06/2023  
External Examiner




*Habil*

Head  
Dr. A.M.Patil  
Department of Physics  
R. C. Patel ACS College, Shirpur



## Project Work

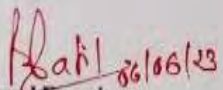
  
R. C. Patel Educational Trust

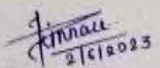
**R. C. Patel Educational Trust's**  
**R. C. Patel Arts, Commerce & Science College**  
**Shirpur, Dist. Dhule (M.S)**

**CERTIFICATE**

**Department of Physics**

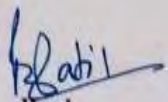
This is to certified that Miss. Solanki Gayatri Jagdish  
Has satisfactorily carried out project work entitled on  
**“PREPARATION & OPTICAL PROPERTIES OF Fe<sub>2</sub>O<sub>3</sub> THIN  
FILMS BY USING CBD METHOD”**  
for the degree of M.Sc. in Physics as laid down by KBC North  
Maharashtra University,  
Jalgaon during Academic Year 2022-23.

  
External Examiner

  
Project Guide  
Prof. K. M. Patil

  
External Examiner



  
Head  
Dr. A.M.Patil  
Department of Physics  
R. C. Patel ACS College, Shirpur

2

## Project Work



R. C. Patel Educational Trust's

R. C. Patel Arts, Commerce & Science College

Shirpur, Dist. Dhule( M.S.)

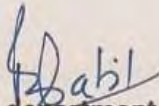
### CERTIFICATE

#### Department of Physics

This is certified that BHAGYASHRI SAKHARAM MARATHE has satisfactorily carried out project work entitled "**Biosynthesis of Silver Nanoparticles using Indian Almond Leafs**" for the degree of M.Sc. in physics as laid down by Kaviyitri Bahinabai Chaudhari North Maharashtra University, Jalgaon during Academic Year 2022-2023.

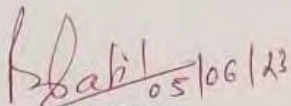
  
Project guide

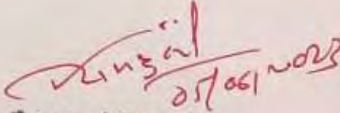
Dr. H.B.Patil

  
Head department

**Head**  
**Department Of Physics**  
R.C.Patel Arts,Commi. & Sci.College  
Shirpur,Dist.Dhule 425 405

College seal

  
External Examiner

  
External Examiner

## Industrial Visits at Jay Industries





## Industrial Visits



**Industrial Visits**





### T.Y.B.Sc Project List 2022-23

Sr. No.	Name of students	Project Title	Name of Project Guide
1.	Banjara Shilpa Bhatusing	Synthesis and optical properties of Pbs thin film	Dr. A. M. Patil
2.	Girase Darshana Prakashsing	Synthesis and Optical Properties of copper sulphide thin film using Chemical Bath System	Dr. H. B. Patil
3.	Koli LalitaBai Ravindra	Synthesis and optical properties of lead sulphide thin film using chemical bath deposition method	Dr. H. B. Patil
4.	Marathe Maheshwari Rajendra	Dielectrics and scattering Properties of a soil at X band Microwave Frequencies	Dr. A. A. Patil
5.	Shaikh AsmaKaosar Kalimoddin	Synthesis and optical properties of cadmium sulphide thin film using chemical bath deposition method	Dr. H. B. Patil
6.	Shimpi Puja Dipak	Study the optical properties of TiO <sub>2</sub> nanoparticles by green synthesis method	Mr. A. C. Bhavsar
7.	Solanki Shweta Jagdish	Dielectrics and emissive behaviour of soil at microwave frequencies.	Dr. A. A. Patil
8.	Teli Mariyam Shaikh Ayyub	Synthesis and optical properties of cadmium sulphide thin film using chemical bath deposition method	Dr. H. B. Patil
9.	Dhangar Girish Pandurang	Study of Single slit and double slit of LASER beam.	Mr. A. C. Bhavsar

**Dr. A. M. Patil**  
**HOD**  
**Department of Physics & Electronics**



### M.Sc. Project List 2022-23

Sr. No.	Name of students	Project Title	Name of Project Guide
1.	Badgujar Manjusha Sunil	Synthesis and Optical Properties of CdS thin films	Dr. A. M. Patil
2.	Bedse Kavita Pratap	Synthesis and Optical Properties of PbS thin films	Dr. A. M. Patil
3.	Birhade Amrapali Anand	Synthesis and Structural Properties of Cds and Pbs Solid Solution by Flux method	Dr. A. M. Patil
4.	Deore Sakshi Nimbajirao	Synthesis and X-Ray analysis of $Pb_xCd_{1-x}S$ (X=0.1, 0.3, 0.5, 0.7, 0.9) by Flux Method	Dr. A. M. Patil
5.	Gavit Kalpana Ramesh	Synthesis and Optical Properties of CdS thin films	Dr. A. M. Patil
6.	Girase Trupti Premsing	Synthesis and Optical Properties of ZnS thin films	Dr. A. M. Patil
7.	Jain Poonam Pratapmal	Synthesis and Structural Properties of CdS and PbS Solid Solution by Flux Method	Dr. A. M. Patil
8.	Jaware Goral yogesh	Synthesis and X-Ray analysis of $Pb_xCd_{1-x}S$ (X=0.1, 0.3, 0.5, 0.7, 0.9) by Flux Method	Dr. A. M. Patil
9.	Mali Tejaswini Prakash	Synthesis and Optical Properties of ZnS thin films	Dr. A. M. Patil
10.	Patil Khushali Nitin	Synthesis and Structural properties of Cds and Pbss Solid Solution by flux method	Dr. A. M. Patil
11.	Patil Nayana Rajendra	Synthesis and Structural properties of Cds and Pbs Solid Solution by flux method	Dr. A. M. Patil
12.	Gavali Priya Rajendra	Study of Dielectrics Properties of Soils at X- Band Microwave Frequencies	Dr. A. A. Patil
13.	Pathak Ankita Anant	Study of Dielectrics Properties of Soils at X- Band Microwave Frequencies	Dr. A. A. Patil
14.	Patil Gauri SatishChandra	Study of Dielectrics Properties of Soils at X- Band Microwave Frequencies	Dr. A. A. Patil
15.	Marathe Bhagyashri Sakharam	Biosynthesis of Silver Nanoparticles Using Indian Almond Leaf	Dr. H. B. Patil
16.	Patil Kanchan Kantilal	Biosynthesis of Silver Nanoparticles Using Indian Almond Leaf	Dr. H. B. Patil
17.	Rajput VrushaliDevi Vijaysing	Biosynthesis of Silver Nanoparticles Using Indian Almond Leaf	Dr. H. B. Patil



18.	Deore Ganesh Rajendra	Study and Structural properties of TiO <sub>2</sub> Nanoparticles by Green Synthesis Method	Mr. A. C. Bhavsar
19.	Hake Lahu Namdeo	Study and Structural properties of TiO <sub>2</sub> Nanoparticles by Green Synthesis Method	Mr. A. C. Bhavsar
20.	Pawar Lina Kiran	Study and Optical properties of TiO <sub>2</sub> Nanoparticles by Green Synthesis Method	Mr. A. C. Bhavsar
21.	Sabe Divya Satish	Study and Optical properties of TiO <sub>2</sub> Nanoparticles by Green Synthesis Method	Mr. A.C. Bhavsar
22.	Sonawane Ashvini Amrut	Study and Optical properties of TiO <sub>2</sub> Nanoparticles by Green Synthesis Method	Mr. A. C. Bhavsar
23.	Patil Vaishnavi Uday	Preparation and optical properties of Fe <sub>3</sub> SO <sub>4</sub> thin films by CBD method.	Mrs. K. M. Patil
24.	Solanki Gayatri Jagdish	Preparation and optical properties of Fe <sub>2</sub> O <sub>3</sub> thin films by CBD method.	Mrs. K. M. Patil
25.	Valvi Yamuna Kella	Preparation and optical properties of Fe <sub>2</sub> O <sub>3</sub> thin films by CBD method.	Mrs. K. M. Patil

*A. M. Patil*

**Dr. A. M. Patil**  
**HOD**

**Department of Physics & Electronics**



## Participative Learning

Academic Year	Sr. No.	Method used	Content
2018-19	1.	Poster Presentations	UG and PG students Science Day Poster Presentation

### Poster Presentations on Science Day



Poster Presentations on Science Day





Academic Year 2019-20	Sr. No.	Method used	Content
	1.	Poster Presentations	UG and PG students Poster presentation on Science day
	2.	Flipped Classroom	Waves

### Poster Presentation on Science Day



Flipped Classroom





Academic Year 2020-21	Sr. No.	Method used	Content
	1.	Poster Presentation	Physics Poster
2.	Flipped Classroom	S.Y.B.Sc Electrical Circuits and diagrams	

**Poster Presentation on Science Day**



## Flipped Classroom





	Sr. No.	Method used	Content
Academic Year 2021-22	1.	Poster Presentation	Physics Posters
	2.	Flipped Classroom	Inter planar distance

### Science Day Celebration





## Poster Presentation on Science Day





## Poster Presentation on Science Day



## Flipped Classroom





	<b>Sr. No.</b>	<b>Method used</b>	<b>Content</b>
<b>Academic Year 2022-23</b>	1.	Group Discussion	MSc 2- Group discussion on Scope of Nanomaterials in future
	2.	Poster Presentations	UG and PG Students
	3.	Flipped Classroom	MSc 1 Instrumentation

### Group Discussion



## Poster Presentation on Science Day





**Poster Presentation on Science Day**



## Flipped Classroom





## Problem Solving

	Sr. No.	Method used	Content
<b>Academic Year 2018-19</b>	1.	Book Review	<p>"Quantum Mechanics: A Modern Development" by Ashok Das is a comprehensive textbook that provides a modern and thorough treatment of quantum mechanics. Das introduces complex concepts with clarity and depth, catering to both undergraduate and graduate students. The book covers a wide range of topics, including advanced quantum mechanics and field theory, with clear explanations and detailed mathematical derivations. While the material can be challenging, Das' systematic approach and numerous examples aid comprehension. Overall, "Quantum Mechanics: A Modern Development" is highly recommended for students and researchers seeking a deeper understanding of quantum theory.</p>
	2.	Book Review	<p>"Classical Mechanics" by Herbert Goldstein is a classic textbook that offers a comprehensive treatment of classical mechanics suitable for graduate-level study. Goldstein's text is highly regarded for its depth of coverage, mathematical rigor, and clear explanations. The book covers a wide range of topics, including Lagrangian and Hamiltonian mechanics, rigid body dynamics, and small oscillations, among others. One of the strengths of Goldstein's textbook is its emphasis on both the theoretical foundations of classical mechanics and its practical applications. The problems included in each chapter are diverse and challenging, encouraging students to apply the theoretical concepts they've learned to real-world scenarios.</p>
	3.	Book Review	<p>"Principles of Quantum Mechanics" by R. Shankar is a widely respected textbook that offers a comprehensive introduction to the principles of quantum mechanics. Shankar's</p>

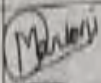

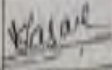
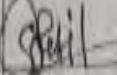
			<p>writing style is clear and engaging, making complex concepts accessible to students at various levels of expertise. The book covers a wide range of topics, including wave-particle duality, the Schrödinger equation, angular momentum, and quantum entanglement. One of the notable features of Shankar's book is its emphasis on mathematical rigor. While this may be challenging for some readers, particularly those without a strong mathematical background, the thoroughness of the mathematical treatment ensures a deep understanding of the subject matter.</p>
	4.	Book Review	<p>Mathews and Walker's textbook provides a clear and concise introduction to mathematical methods commonly used in physics. It covers topics such as complex analysis, Fourier series, special functions, and integral transforms, with applications to classical mechanics, electromagnetism, and quantum mechanics. The book's approachable writing style, numerous worked examples, and practical exercises make it suitable for undergraduate students with a basic understanding of calculus.</p>
	5.	Expert Talk	<p>1. Recent trends on Nanomaterial  Dr. V. R. Chaudhari  Dr. P. O. Patil  Dr. H. S. Mahajan  2. Social work Dr. Trupti Desai</p>

**List of students for book review**

R.C.Patel Arts, Commerce & Science College, Shirpur

Department of Physics

Book Review Attendance Year: 2018 - 2019

Sr.No.	Name of the student	Book Name	Author	Sign.
1	Mankani Mona Mukesh	Quantum Mechanics	Ashok Dass	
2	Shaikh Nida R.	Classical Mechanics	Herbert Goldstein	
3	Kasare Veerhali R.	Principle of Q.M	R. Shankar	
4	Patil Sachin Gopal	M.M.P	John Mathew	

**Expert Talk by Dr. P. O. Patil**



**Expert Talk by Dr. V. R. Chaudhari**



**Expert Talk by Dr. H. S. Mahajan**





**Expert Talk on Recent trends on Nanomaterials**



**Expert Talk by Dr. Trupti Desai**





	<b>Sr. No.</b>	<b>Method used</b>	<b>Content</b>
<b>Academic Year 2019-20</b>	1.	Book Review	<p>"Introductory Nuclear Physics" by Kenneth S. Krane:            Krane's textbook provides a comprehensive introduction to nuclear physics for undergraduate students. It covers topics such as nuclear structure, radioactive decay, nuclear reactions, and nuclear models, with an emphasis on both theoretical concepts and experimental techniques. The book is known for its clear explanations, numerous examples, and practical exercises, making it accessible to students with varying levels of background knowledge in physics.</p>
	2.	Book Review	<p>QM: Concepts and Applications by Zettili:            Zettili's clear writing style and step-by-step explanations make abstract concepts accessible. The book covers a wide range of topics, from fundamental principles to advanced applications, with numerous examples and exercises to reinforce learning. While some may find the mathematical formalism challenging, Zettili's approach fosters a deep understanding of quantum mechanics. Overall, it's a highly recommended resource for students seeking a thorough grasp of the subject.</p>
	3.	Book Review	<p>"Introduction to Electrodynamics" by David J. Griffiths:            Griffiths' book is a staple in many undergraduate physics courses. It offers a clear and concise introduction to the principles of electrodynamics, blending theoretical concepts with practical applications. The text is known for its accessible writing style and well-crafted explanations, making it suitable for students with varying levels of prior knowledge. The problem sets provided at the end of each chapter are diverse and challenging, helping students solidify their understanding through practice.</p>
	4.	Book Review	<p>"Mathematical Methods in the Physical Sciences" by Mary L. Boas:            Boas' textbook is a comprehensive introduction to mathematical methods commonly used in physics. It covers topics such as calculus, differential equations, linear algebra, complex analysis, and Fourier analysis, with applications to various areas of physics. The book is known for its clear explanations, numerous examples, and practical exercises, making it accessible to undergraduate students with varying levels of</p>

			mathematical background.
5.	Expert Talk		Dr. S. T. Bendre, Dr. L. A. Patil, Dr. I. J. Patil, Dr. S. R. Gosavi, Dr. R. S. Khadayte, Dr. P. P. Jagtap
6.	Expert Talk		Study of emerging fields in Physics

**List of students for book review**

**R.C.Patel Arts, Commerce & Science College, Shirpur**

**Department of Physics**

**Book Review Attendance** **Year: 2019 - 2020**

Sr.No.	Name of the student	Book Name	Author	Sign.
1.	Upadhyay Shweta R.	Intro. N.P.	K. S. Keane	
2.	Patil Milind Anil	Quantum mechanics	Zetilli	
3.	Patil Vaibhav chandr ashekar	Introduction to ED	David J. Griffiths	
4.	Patil Nikita Laxman	MMP	Mary L. Bass	



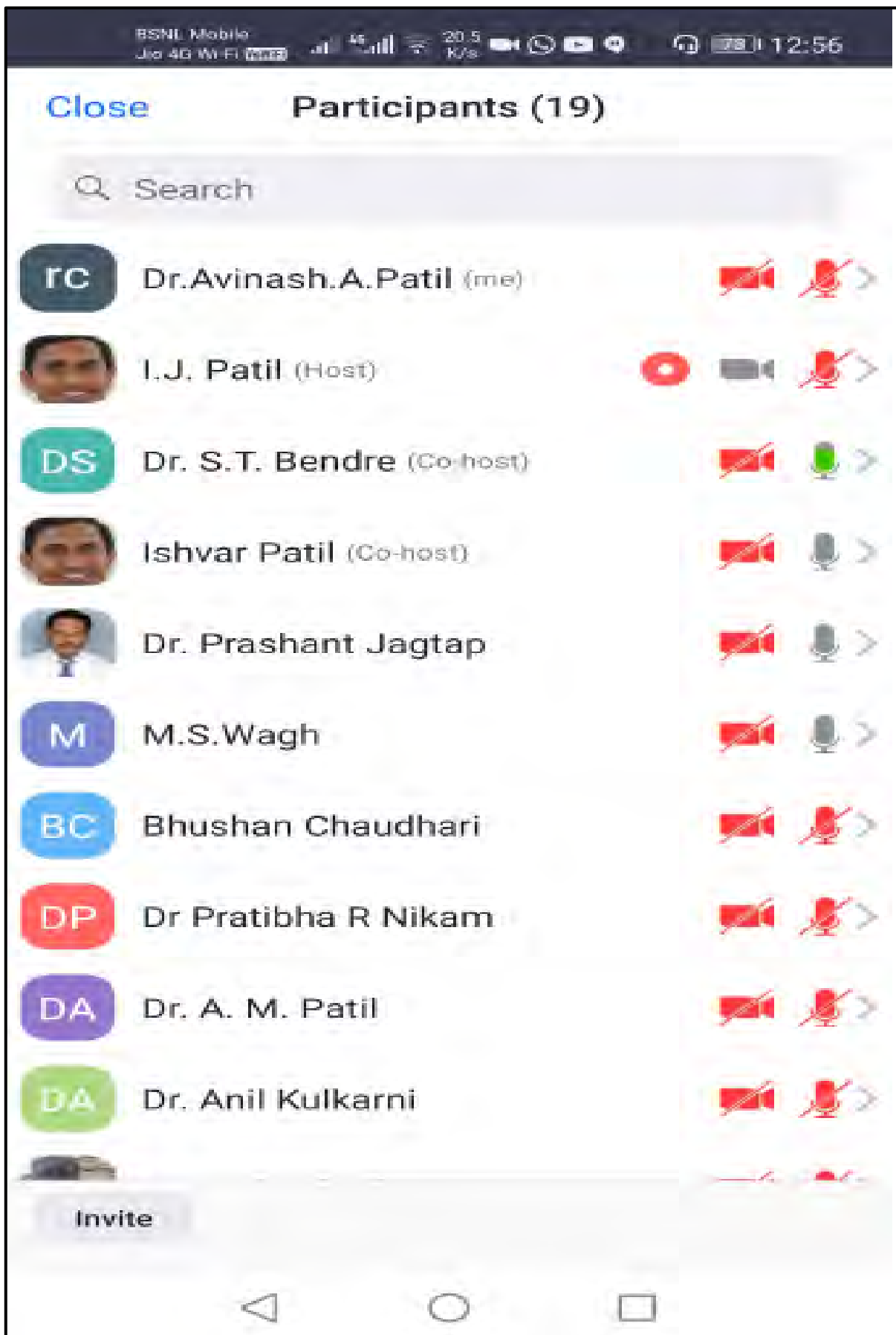
## Seven Day's Webinar on Study of emerging fields in Physics

Date	Time	Resource Person	Topic
26/05/2020	4.00 p.m. to 5.00 p.m.	Dr.S.T.Bendre Director, School of Physical Sciences, KBCNMU, Jalgaon	Green Energy
27/05/2020	4.00 p.m. to 5.00 p.m.	Prof.Dr. L.A.Patel Princ. Pratap College, Amalner	Nano Technology
28/05/2020	4.00 p.m. to 5.00 p.m.	Dr. I.J.Patel Asst. Professor P.S.G.V.P.S.College,Shahada	Quantum Physics
29/05/2020	4.00 p.m. to 5.00 p.m.	Dr. S.R.Gosavi Asst. Professor, ASC College, Taloda	X-ray Analysis
30/05/2020	4.00 p.m. to 5.00 p.m.	Dr. R.S.Khadayte Asso. Professor, ASC College, Jamner	Solar Energy
01/06/2020	4.00 p.m. to 5.00 p.m.	Dr. P.P.Jagtap Asst. Professor P.S.G.V.P.S.College,Shahada	Crystal Structure

## Seven Day's Webinar on Study of emerging fields in Physics

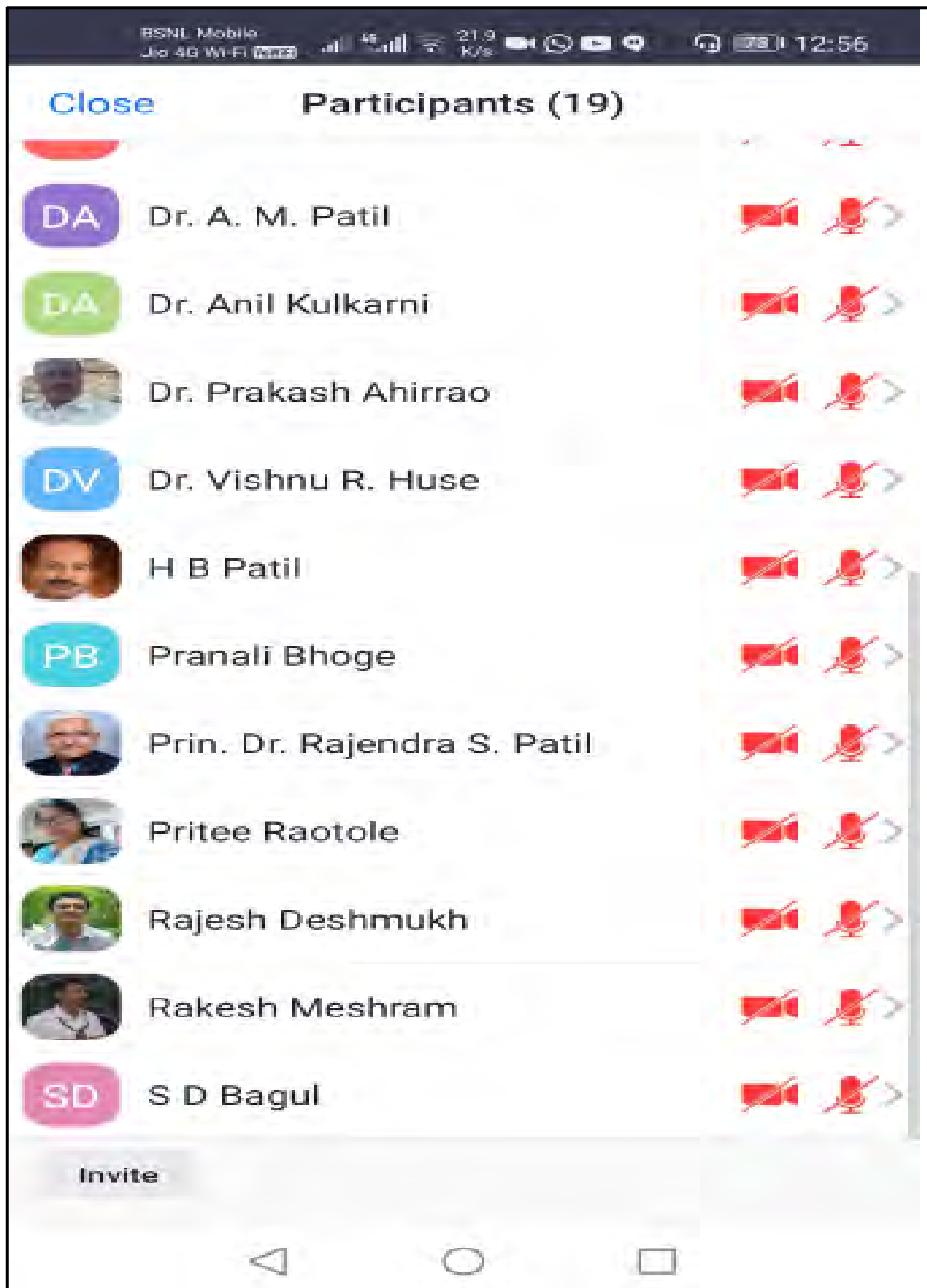
Theme of Webinar		Expected outcomes of Webinar	
<p>The world is facing the problem of Covid-19. Due to such serious issue all sectors are get suffered. It creates impact on education system also. By thinking this issue, our institute plans to take initiative as a online learning platform during this situation of Novel Covid-19 for the students . This webinar is specially organized for Physics students.</p>		<ul style="list-style-type: none"> <li>•Aware the students about online resources of Physics learning</li> <li>•Students can aware the various emerging fields of Physics</li> </ul>	
Eminent Resource Persons		Registration Details	
26 May Green Energy (Dr. S.T. Bendre)	27 May Nano Technology (Dr. L.A.Patil)	<ul style="list-style-type: none"> <li>•There is no Registration Fees for the Webinar</li> <li>•Filling the registration form is mandatory</li> <li>• E-Certificate will be issued to all registered participants only.</li> <li>•Webinar will be conducted through Zoom App</li> <li>•Updates regarding webinar will be provided on Whats app group</li> <li>•After completion of Webinar, Feedback link would be provided, registered participants need to submit feedback form.</li> </ul>	
28 May Quantum Physics (Dr. L.J.Patil)	29 May X-ray Analysis (Dr. S.R.Gosawi)	<p>The webinar is available on ZOOM app</p>	
30 May Solar Energy (Dr. R.S.Khadayte)	1 June Crystal Structure (Dr. P.P.Jagtap)		
<p><b>Registration Link:</b> <a href="https://forms.gle/4MMG73Ak5qMdvbwF6">https://forms.gle/4MMG73Ak5qMdvbwF6</a></p>			
Organizing Committee			
Dr. A.M.Patil Co-ordinator	Principal Dr. D.R.Patil Convener	Dr. A.A.Patil Co-coordinator	
Dr. H.B.Patil Co-coordinator	<b>Department of Physics</b>		

Seven Day's Webinar on Study of emerging fields in Physics





Seven Day's Webinar on Study of emerging fields in Physics







R.C. Patel Educational Trust's  
R.C. Patel Arts, Commerce & Science  
College, Shirpur

# Certificate of Appratiation



Webinar Series

on

*“Study of Emerging Fields in Physics”*

*This is to certify that, Dr. P. P. Jagtap of the Institute P.S.G.V.P.S. ASC College, Shahada has participated as a Resource Person and delivered talk on the topic “Crystal Structure” in the webinar organized by Departments of Physics, R. C. Patel Arts Comm. & Sci. College, Shirpur on 1<sup>st</sup> June 2020.*



Dr. A.A. Patil  
Co-coordinator

Dr. A.M. Patil  
Co-ordinator

Principal Dr. D.R. Patil  
Convener

	Sr. No.	Method used	Content
<b>Academic Year 2020-21</b>	1.	Book Review	<p>"Introduction to Electrodynamics" by David J. Griffiths:</p> <p>Griffiths' book is a staple in many undergraduate physics courses. It offers a clear and concise introduction to the principles of electrodynamics, blending theoretical concepts with practical applications. The text is known for its accessible writing style and well-crafted explanations, making it suitable for students with varying levels of prior knowledge. The problem sets provided at the end of each chapter are diverse and challenging, helping students solidify their understanding through practice.</p>
	2.	Book Review	<p>Quantitative Aptitude by R.S. Aggarawal is a comprehensive guide for anyone preparing for competitive exams or aiming to improve their mathematical skills. This book covers a wide range of topics including arithmetic, algebra, geometry and data interpretation.</p>
	3.	Book Review	<p>Introduction to Quantum Mechanics" by David J. Griffiths</p> <p>"Introduction to Quantum Mechanics" by David J. Griffiths offers clear explanations and intuitive insights into complex quantum concepts. Its balanced approach combines conceptual understanding with mathematical rigor, aided by engaging writing and relatable examples. The problem sets progressively challenge students, and detailed solutions aid self-assessment. While some may find the math daunting, Griffiths' clarity and organization make this textbook highly recommended for undergraduates.</p>
	4.	Book Review	<p>"Introduction to Classical Mechanics: With Problems and Solutions" by David Morin</p> <p>"Introduction to Classical Mechanics: With Problems and Solutions" by David Morin is a highly acclaimed textbook offering a modern and engaging approach to classical mechanics. Morin's clear writing style and emphasis on conceptual understanding make this book accessible to students at various levels. The inclusion of numerous problems with detailed solutions allows readers to reinforce their understanding and develop problem-solving skills. The book covers a wide range of topics,</p>

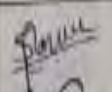
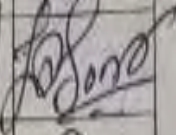

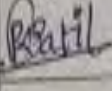
			including Newtonian mechanics, Lagrangian and Hamiltonian formalisms, rigid body motion, and nonlinear dynamics. Overall, Morin's "Introduction to Classical Mechanics" is an invaluable resource for students and educators alike, providing a solid foundation in classical physics.
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**List of students for book review**

**R.C.Patel Arts, Commerce & Science College, Shirpur**

**Department of Physics**

**Book Review Attendance** Year: 2020-21

Sr.No.	Name of the student	Book Name	Author	Sign.
1.	Sonaware Priyanka B.	Introduction to Electrodynamics	David J. Griffiths	
2.	Sonare Lokesh D.	Quantitative Aptitude	R.S. Agrawal	
3.	Pandeshi Bhagyashiv.	Introduction to Q.M.	David Griffiths	
4.	Patil Priti Kailas	Introduction to classical Mech.	David Morin	



	Sr. No.	Method used	Content
<b>Academic Year 2021-22</b>	1.	Book Review	<p>QM: Concepts and Applications by Zettili: Zettili's clear writing style and step-by-step explanations make abstract concepts accessible. The book covers a wide range of topics, from fundamental principles to advanced applications, with numerous examples and exercises to reinforce learning. While some may find the mathematical formalism challenging, Zettili's approach fosters a deep understanding of quantum mechanics. Overall, it's a highly recommended resource for students seeking a thorough grasp of the subject.</p>
	2.	Book Review	<p>"Principles of Electrodynamics" by Melvin Schwartz: Schwartz's book provides a thorough introduction to the principles of electrodynamics, with an emphasis on clarity and accessibility. The text covers a wide range of topics, from electrostatics and magnetostatics to electromagnetic waves and radiation. Schwartz's approachable writing style and clear explanations make complex concepts easy to grasp for undergraduate students.</p>
	3.	Book Review	<p>"Microelectronic Circuits" by Adel S. Sedra and Kenneth C. Smith: Sedra and Smith's textbook is widely used in undergraduate electronics courses. It offers a thorough treatment of microelectronic circuits, covering topics such as semiconductor physics, MOSFETs, BJTs, and amplifier design. The book emphasizes intuitive understanding through conceptual explanations and practical examples. It also includes a wealth of supplementary resources, including circuit simulation software and online tutorials, to enhance student learning.</p>
	4.	Book Review	<p>"Mathematical Methods for Physicists" by George B. Arfken, Hans J. Weber, and Frank E. Harris: Arfken, Weber, and Harris provide a thorough treatment of mathematical methods relevant to physics. The textbook covers topics such as vector calculus, special functions, Fourier analysis, and partial differential equations, with applications to classical and quantum mechanics, electromagnetism, and statistical physics. The book's clear exposition, detailed explanations, and extensive problem sets make it suitable for</p>

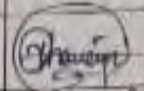
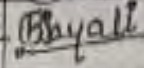
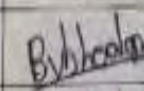
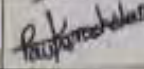
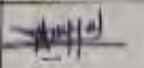
			undergraduate students studying mathematical physics
	5.	Book Review	<p>"Classical Electrodynamics" by John David Jackson:</p> <p>Jackson's textbook is widely regarded as a classic in the field of electrodynamics. It offers a comprehensive treatment of the subject, covering both classical and modern topics in depth. While the text can be dense and challenging for some students, it provides a thorough mathematical foundation for advanced study in physics. The problem sets are extensive and thought-provoking, encouraging students to delve deeper into the material.</p>

### List of students for book review

**R.C.Patel Arts, Commerce & Science College, Shirpur**

**Department of Physics**

**Book Review Attendance** Year: 2021-2022

Sr.No.	Name of the student	Book Name	Author	Sign.
1	Chavan Yogita M.	G.M. Concept and Applications	Zetli	
2-	Bhavsar Sayali	Principle of Electrodynamics	Melvin Shwartz	
3.	Bhadane Bhumika	Microelectronic circuit	A.S. Sedra & K.C. Smith	
4.	Pawar chetan K.	Mathematical methods of physics	George B. Arfken & H.J. Weber	
5-	Sayyed Aazooz.	Principle of Electrodynamics	Melvin shwartz & D. Jackson	





## Book Review



	Sr. No.	Method used	Content
<b>Academic Year 2022-23</b>	1.	Book Review	<p>"Fundamentals of Microelectronics" by Behzad Razavi:</p> <p>Razavi's textbook offers a modern and comprehensive approach to the study of microelectronics. It covers fundamental concepts such as semiconductor physics, MOSFETs, and digital CMOS circuits, as well as advanced topics like noise analysis and RF circuits. The book is known for its clear explanations and intuitive presentation of complex concepts, making it suitable for undergraduate students with varying levels of background knowledge</p>
	2.	Book Review	<p>Nuclear Physics: Principles and Applications" by John Lilley:</p> <p>Lilley's textbook offers a modern and comprehensive treatment of nuclear physics. It covers topics such as nuclear structure, nuclear reactions, nuclear astrophysics, and applications of nuclear technology, with a focus on both theoretical concepts and experimental methods. The book is known for its clear exposition, detailed explanations, and extensive problem sets, making it suitable for undergraduate students studying nuclear physics.</p>
	3.	Book Review	<p>"Electricity and Magnetism" by Edward M. Purcell and David J. Morin:</p> <p>This textbook offers a modern approach to the study of electricity and magnetism. It is known for its engaging writing style and emphasis on conceptual understanding. Purcell and Morin present the material in a way that encourages active learning, with numerous examples and illustrations to aid comprehension. The book also includes a variety of problems ranging from basic to advanced, making it suitable for self-study as well as classroom use.</p>
	4.	Book Review	<p>"Classical Mechanics" by Herbert Goldstein" Classical Mechanics" by Herbert Goldstein is a classic textbook that offers a comprehensive treatment of classical mechanics suitable for graduate-level study. Goldstein's text is highly regarded for its depth of coverage,</p>

			mathematical rigor, and clear explanations. The book covers a wide range of topics, including Lagrangian and Hamiltonian mechanics, rigid body dynamics, and small oscillations, among others. One of the strengths of Goldstein's textbook is its emphasis on both the theoretical foundations of classical mechanics and its practical applications. The problems included in each chapter are diverse and challenging, encouraging students to apply the theoretical concepts they've learned to real-world scenarios.
	5.	Expert Talk	Dr. S. T. Shinde, Dr. R. M. Shewale, Dr. Harshal Patil

**List of students for book review**

**R.C.Patel Arts, Commerce & Science College, Shirpur**  
**Department of Physics**

**Book Review Attendance** **Year: 2022-23**

Sr.No.	Name of the student	Book Name	Author	Sign.
1.	Marathe bhagyashri shatbhatare	fundamental of micro electronics	Bahzad Razvi	<i>(Signature)</i>
2.	Solaruki Gayatri Jagdish	nuclear physics principle & applied	John Wiley	<i>(Signature)</i>
3.	Jawate Girish A.	Electricity & magnetism	Edward. M Purcell	<i>(Signature)</i>
4.	Vaishnavi Uday Patil	Classical Mechanics	Herbert Goldstein	<i>(Signature)</i>

**Book Review**



**Guest Visit**





**Expert Talk by Dr. R. M. Shewale**



**Expert Talk by Dr. Harshal Patil**





**Expert Talk by Dr. S. T. Shinde**



**Expert Talk by Dr. S. T. Shinde**



**R. C. Patel Educational Trust's**  
**R. C. Patel Arts, Commerce and Science College Shirpur**  
**Department of Physics**  
**The Details of ICT Pedagogy used in Teaching Learning Process**  
**For the academic year 2018-19**

Sr. No.	Contents	Type of ICTMaterial	Source	Links
1.	1. Quartz Crystal Microbalance (M.Sc. 2) 2. Molten carbonate fuel cell (M.Sc. 2)	You-tube Video	Drive	<a href="https://youtu.be/XaQaak-NA8A?si=IEQ7tCtagipGxr5O">https://youtu.be/XaQaak-NA8A?si=IEQ7tCtagipGxr5O</a> <a href="https://youtu.be/WWm6HxPGXj0?si=ccdh4LN_wedUZMaA">https://youtu.be/WWm6HxPGXj0?si=ccdh4LN_wedUZMaA</a>
2.	Physics  EVS  Waves and Oscillation  EVS  Mathematical Physics  Waves and Oscillation  S.Y.B.Sc. SEM II(Instrumentation )  T.Y.B.Sc. SemV (Microprocessor I) Sem VI Microprocessor II	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjE1Mjg2NTk0MzA5?cjc=r434cp7">https://classroom.google.com/c/MjE1Mjg2NTk0MzA5?cjc=r434cp7</a> <a href="https://classroom.google.com/c/MzM4Nzg0ODQ3NDA0?cjc=y6dc2ck">https://classroom.google.com/c/MzM4Nzg0ODQ3NDA0?cjc=y6dc2ck</a> <a href="https://classroom.google.com/c/MzE0Mzg2MDk2NjQx?cjc=rcjqdx5">https://classroom.google.com/c/MzE0Mzg2MDk2NjQx?cjc=rcjqdx5</a> <a href="https://classroom.google.com/c/MzE0Mzg2MDk2NjQx?cjc=rcjqdx5">https://classroom.google.com/c/MzE0Mzg2MDk2NjQx?cjc=rcjqdx5</a> <a href="https://classroom.google.com/c/MjA0NzEyMTQwNTc5?cjc=dyu4xk7">https://classroom.google.com/c/MjA0NzEyMTQwNTc5?cjc=dyu4xk7</a> <a href="https://classroom.google.com/c/NjU0OTAxNjc3MzI4?cjc=dfsttfy">https://classroom.google.com/c/NjU0OTAxNjc3MzI4?cjc=dfsttfy</a> <a href="https://classroom.google.com/c/NjU0OTAxNjc3MzI4?cjc=dfsttfy">https://classroom.google.com/c/NjU0OTAxNjc3MzI4?cjc=dfsttfy</a> <a href="https://classroom.google.com/c/NDEwMzcxMDE1NDU2?cjc=3mzng4t">https://classroom.google.com/c/NDEwMzcxMDE1NDU2?cjc=3mzng4t</a> <a href="https://classroom.google.com/c/MjI2NjY0OTAzMDI4?cjc=sbblukt">https://classroom.google.com/c/MjI2NjY0OTAzMDI4?cjc=sbblukt</a>

	<p>S.Y.B.Sc.SEM III (Instrumentation)</p> <p>T.Y.B.Sc. SemV (Microprocessor I) Sem VI (Microprocessor II )</p> <p>T.Y.B.Sc. SemV (Microprocessor I) Sem VI (Statistical Mechanics and Thermodynamics )</p> <p>M.Sc. I SEM II (Stastical Mechanics)</p> <p>S.Y.B.Sc.SEM III (Instrumentation)</p> <p>T.Y.B.Sc. SemV (Microprocessor I ) Sem VI (Statistical Mechanics and Thermodynamics )</p> <p>M.Sc. I SEM II (Stastical Mechanics)</p>			<p><a href="https://classroom.google.com/c/MTE3MzM5NzM4MjYw?cjc=tobhuaf">https://classroom.google.com/c/MTE3MzM5NzM4MjYw?cjc=tobhuaf</a></p> <p><a href="https://classroom.google.com/c/MTQ5MDYyNDczNDRa?cjc=faecn3s">https://classroom.google.com/c/MTQ5MDYyNDczNDRa?cjc=faecn3s</a></p> <p><a href="https://classroom.google.com/c/NDA3OTY3ODQyMTRa?cjc=wn4q4fr">https://classroom.google.com/c/NDA3OTY3ODQyMTRa?cjc=wn4q4fr</a></p> <p><a href="https://classroom.google.com/c/NDc4NTYzMTc0MzNa?cjc=cbrvwsc">https://classroom.google.com/c/NDc4NTYzMTc0MzNa?cjc=cbrvwsc</a></p> <p><a href="https://classroom.google.com/c/MjcxNDQ0NzQ2NTFa?cjc=k7cpuj2">https://classroom.google.com/c/MjcxNDQ0NzQ2NTFa?cjc=k7cpuj2</a></p> <p><a href="https://classroom.google.com/c/MjcwODk0NDE2NDIa?cjc=tidravv">https://classroom.google.com/c/MjcwODk0NDE2NDIa?cjc=tidravv</a></p> <p><a href="https://classroom.google.com/c/MjcwOTE5NjI1MTBa?cjc=bue7lnt">https://classroom.google.com/c/MjcwOTE5NjI1MTBa?cjc=bue7lnt</a></p>
3.	<p>1. Material Synthesis Method (M.Sc. 2) 2. Renewable Energy Harvesting</p>	Test using Google form or Testmoz	Drive	<p><a href="https://docs.google.com/forms/d/1I0L2Vt2h9TBQrF9C9IMaNb7TpT36t64H9pbM1AZQKhI/edit?usp=drivesdk">https://docs.google.com/forms/d/1I0L2Vt2h9TBQrF9C9IMaNb7TpT36t64H9pbM1AZQKhI/edit?usp=drivesdk</a></p> <p><a href="https://docs.google.com/forms/d/1cqGZd">https://docs.google.com/forms/d/1cqGZd</a></p>



	(S. Y. B. Sc.)			<a href="https://1drv.ms/p/c/34679f5ab06093d6/EJkYvD8byYGvCCOystFHjMC69-JwVDsTzDaQBMo/edit?usp=drivesdk">JkYvD8byYGvCCOystFHjMC69-JwVDsTzDaQBMo/edit?usp=drivesdk</a>
4.		PPT	Drive	<a href="https://1drv.ms/p/c/34679f5ab06093d6/ERfunDdWxSNCIKKcPcHu40sIBkxGS2QAQyqdXH_3TferfaA">https://1drv.ms/p/c/34679f5ab06093d6/ERfunDdWxSNCIKKcPcHu40sIBkxGS2QAQyqdXH_3TferfaA</a> <a href="https://1drv.ms/p/c/34679f5ab06093d6/EdaTYLBan2cggDSEAAAAAABq73DONbE677jFXiHIO2-Lw">https://1drv.ms/p/c/34679f5ab06093d6/EdaTYLBan2cggDSEAAAAAABq73DONbE677jFXiHIO2-Lw</a> <a href="https://1drv.ms/p/c/34679f5ab06093d6/EdaTYLBan2cggDS0AAAAAAB2cuCrw1z81AY5B6DqMPbxw">https://1drv.ms/p/c/34679f5ab06093d6/EdaTYLBan2cggDS0AAAAAAB2cuCrw1z81AY5B6DqMPbxw</a>



## R. C. Patel Educational Trust's

### R. C. Patel Arts, Commerce and Science College Shirpur

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#### Student Centric Learning (Pedagogies Used) Department of Physics & Electronics

- **Pedagogy used for Teaching –**
  - Lecture-Based Instruction: Provides foundational knowledge through structured presentations.
  - Hands-On Laboratory Experiments: Allows practical application and skill development.
  - Project-Based Learning (PBL): Engages students in real-world projects for problem-solving.
  - Simulation and Modeling: Utilizes software to visualize and analyze electronic systems.
  - Flipped Classroom: Pre-class material review, followed by interactive in-class activities.
  - Peer Instruction: Students learn through collaboration and discussion.
  - Problem-Based Learning (PBL): Challenges students with real-world problems to solve.
  - Active Learning Strategies: Engages students through various interactive techniques.
  
- **Tools and Materials used-**
  - Soldering iron
  - Breadboard
  - Oscilloscope
  - Wire cutters
  - Power supply
  - Logic analyser
  - Integrated circuits
  - Resistors, capacitors, inductors
  - Transistors, diodes
  - Printed circuit boards (PCBs)
  - Connectors, headers
  - Enclosures
  - Cables, wires
  - Prototyping materials
  
- **Description of the Methods -**
  - Soldering: Joining components with solder.
  - Analysis: Understanding circuit behaviour.
  - Simulation: Modelling circuits digitally.
  - Prototyping: Testing preliminary designs.
  - Testing: Measuring signals and performance.
  - Troubleshooting: Diagnosing and fixing faults.
  - Design: Planning circuits and systems.
  - Programming: Writing code for control.

- **Outcomes (Learning Experience) -**
  - Understanding circuit principles
  - Hands-on skills
  - Problem-solving abilities
  - Design competency
  - Critical thinking
  - Collaboration and communication
  - Adaptability to new technologies
  - Ethical and professional conduct

## Experiential Learning

Academic Year	Sr. No.	Method used	Content
2019-20	1.	Quiz	University Level Online Test

- Quiz/ Contest Details – 28 April 2020. Department of Electronics organized college level the name of quiz is “University Level Online Test for S.Y.B.sc in Electronics”. In this competition a student from MGSM’s Arts, Science & Commerce, college and other colleges took participation.

### Online Quiz Certificate 2019-20





Academic Year	Sr. No.	Method used	Content
2021-22	1.	Quiz	Online Electronic Knowledge Test

- Quiz/ Contest Details – 20 March 2022. Department of Electronics organized inter-college level ' Online Electronic Knowledge Test'. In this competition a student from S.Y.B.Sc took participation

### Quiz Certificate 2021-22



RC Patel Education Trust's

R.C. Patel Arts, Commerce & Science College Shirpur

Dist.Dhule



# Certificate

THIS CERTIFICATE IS PROUDLY PRESENTED TO

*Patil Kapil Narayan*

(This is certified that he/she qualified the test with more than 60% on date:)

**ONLINE Electronic knowledge Test-2022**

Organized by

**DEPARTMENT OF PHYSICS & ELECTRONICS**




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Prof. Shaikh Sajid  
Coordinator




---

Prof. S.G. Bachhav  
Head of Department




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Dr. D.R Patil  
Principal

Date:20 March 2022

Made for free with Certify'em

Academic Year 2022-23	Sr. No.	Method used	Content
	1.	Project Work	Project Work F.Y.Bsc
	2.	Workshop	Arduino & its Application
	3.	Quiz	S.Y.B.Sc

Project Work: (Lab work not official) Mini Project based on practical's circuit.

- Tours/workshop – Students Participated in workshop which is organized by department of Electronics at Arts, Science & Commerce College Chopda which is titled by “Arduino & its Application”. The list of students names is given below.
- Quiz/ Contest Details – 20 March 2023. Department of Electronics organized inter-college level 'Online Electronic Knowledge Test'. In this competition a student from S.Y.B.sc took participation

### Quiz Certificate 2022-23



<b>Workshop Student list 2022-23</b>	
<b>Sr. No.</b>	<b>Name of Students</b>
1.	Deshmukh Darpan
2.	Pawar Rohit
3.	Patil Vaibhavi
4.	Patil Aankansha
5.	Shirsath Prasad
6.	Sonar Shubham
7.	Dalal Gopal
8.	Chaudhari Tejaswini
9.	Bhavsar Lalit

<b>Sr. No.</b>	<b>Name of Students</b>
1.	Nikam Rohan Nandlal
2.	Ahire Purushottam Kailas
3.	Rajput Jaypal Rajesing





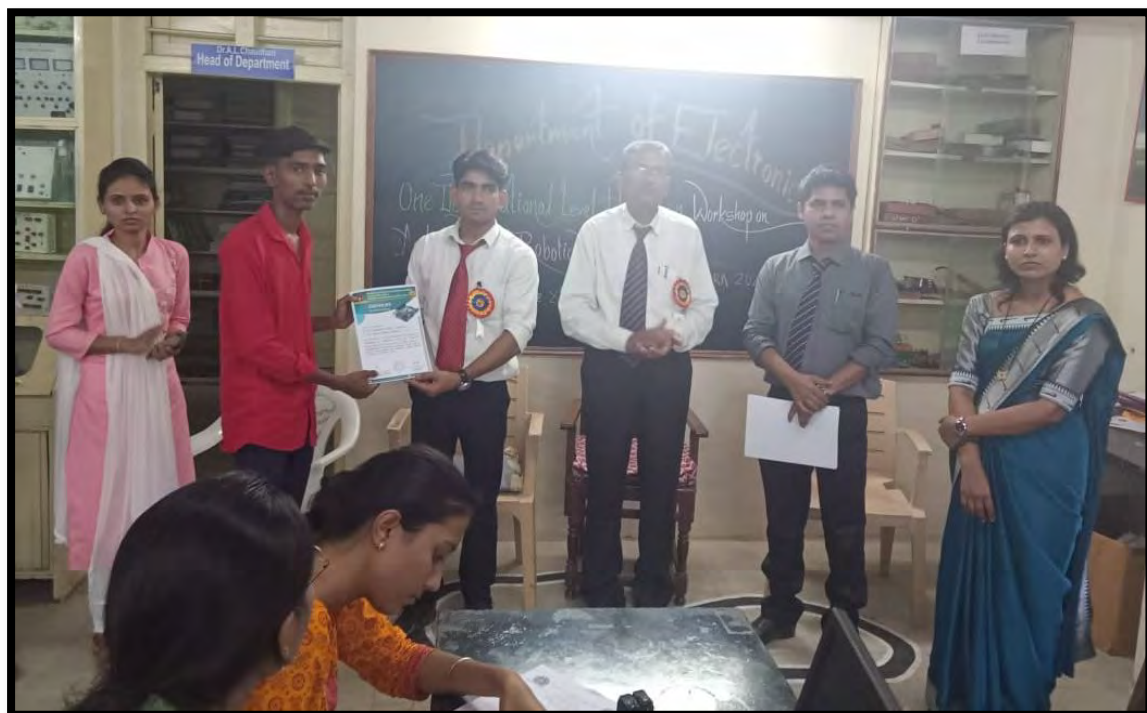
Academic Year	Sr. No.	Method used	Content
2023-24	1.	Industrial Visits	F.Y.B.Sc, S.Y.B.sc

➤ Tours/workshop – Students Participated in workshop which is organized by department of Electronics at „Dadasaheb Dr. Suresh G. Patil College Chopda“ workshop is titled by “Arduino & its Application”. The list of students is given below.

### Chopda Workshop 2022-23



### Chopda Workshop 2022-23





<b>Tours (Workshop) student list 2023-24</b>	
<b>Sr. No.</b>	<b>Name of Students</b>
1.	Patil Rashmi Arun
2.	Patil Chetana Arun
3.	Kalekar Dhiraj Rajendra
4.	Kalekar Dhananjay Rajendra
5.	Patil Guarav Sandip
6.	Ogale Raj Umesh
7.	Borse Nayan Himmatrao
8.	Pawar Monika
9.	Mali Chandrakant
10.	More Manasi Dipak
11.	Patil Disha Mahendra
12.	Karandikar Tanvi santosh
13.	Pandey Sanjana Omprakash
14.	Patil Vaishnavi Sandip
15.	Thakre Hemangi Ravsaheb
16.	Girase Ruchita Himmatsing
17.	Badgujar Purva Sandip

<b>Sr. No.</b>	<b>Name of Students</b>
1.	Patil Rashami Arun
2.	Patil Khushi Jagdish
3.	Girase Apurva Virendrasing
4.	Koalapakar Puja Nandkishor

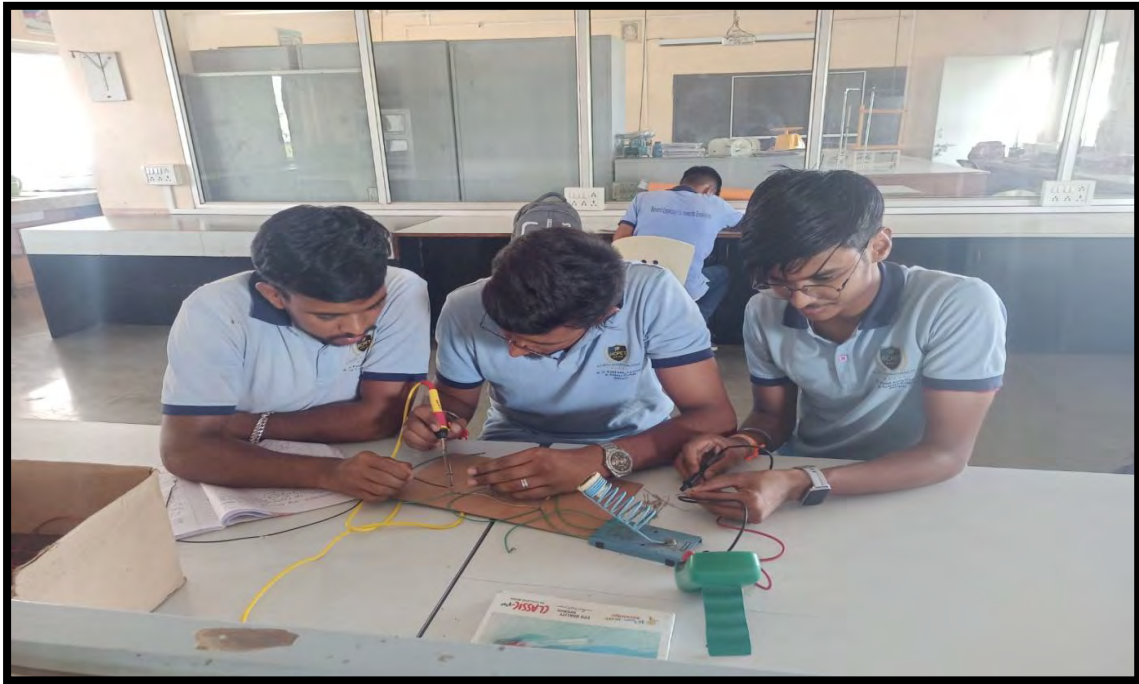


**Chopda Workshop 2022-23**





**Mini Project based on practical 2022-23**



**Chopda Workshop Photos 2022-23**





**Chopda Workshop Photos 2022-23**

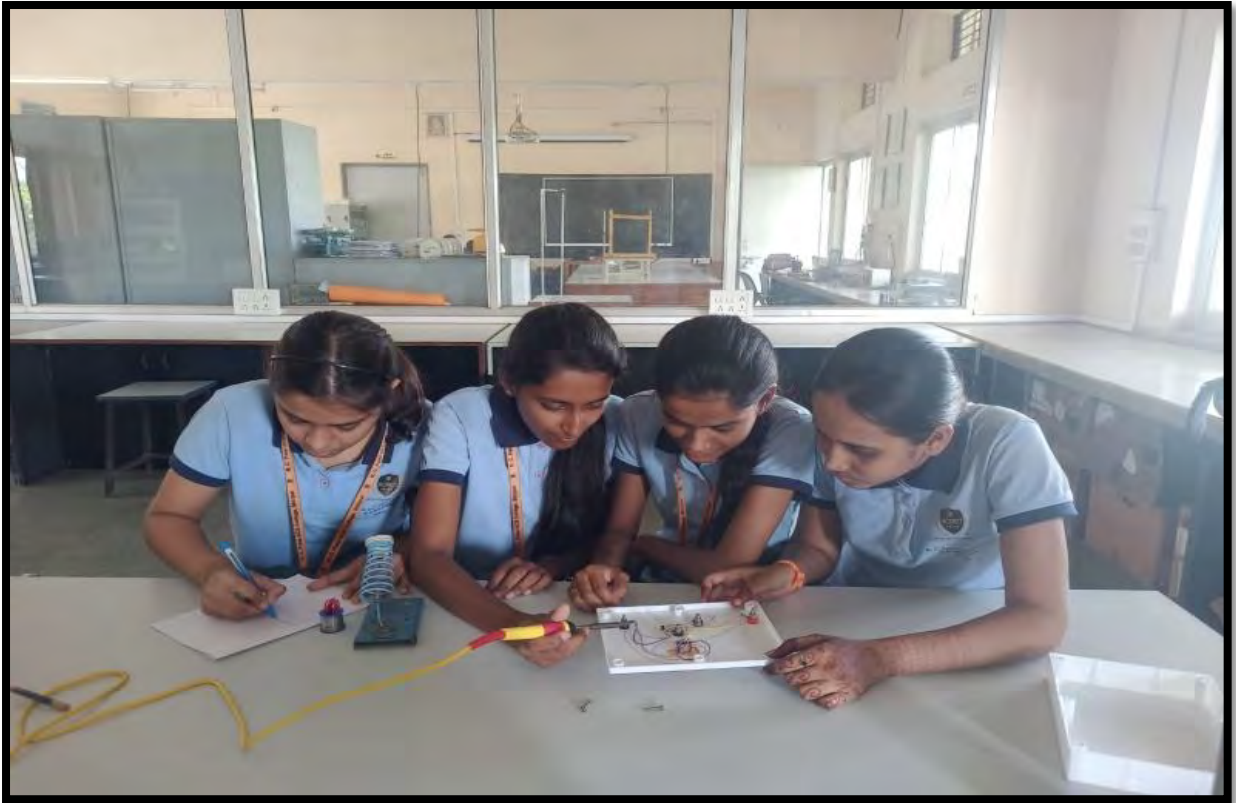


**Chopda Workshop Photos 2022-23**



**Mini Project based on practical 2022-23**





**Mini Project**



## Participative Learning

Academic Year	Sr. No.	Method used	Content
2019-20	1.	Poster Presentations	UG and IT based poster like Embedded system, Arduino, etc

### Poster Presentation





Academic Year 2022-23	Sr. No.	Method used	Content
	1.	Group Discussion	Difference Between Digital and Analog Electronics
	2.	Poster Presentations	UG & PG students
	3.	Flipped Classroom	F.Y Syllabus Topics

### Group Discussion 2022-23



**Flipped Classroom 2022-23**





## Problem Solving

	Sr. No.	Method used	Content
Academic Year 2022-23	1.	Case Studies	Measurement: How to measure resistor values theoretically as well as practically. How to measure basic Electronics components.

### F.Y Students Case Study on Basic Electronics



**R. C. Patel Educational Trust's**  
**R. C. Patel Arts, Commerce and Science College Shirpur**  
**Department of Physics & Electronics**  
**The Details of ICT Pedagogy used in Teaching Learning Process**  
**For the academic year 2020-21**

Sr. No.	Contents	Type of ICTMaterial	Source	Links
1.	S.Y.B.Sc	Quiz-2019-20	Drive	<a href="https://docs.google.com/forms/d/e/1FAIpQLSczTJAArnc1PbCvsDvIABdrP4bvV6PCGI_8EvsdsGUYhmfQNA/viewform?usp=sf_link">https://docs.google.com/forms/d/e/1FAIpQLSczTJAArnc1PbCvsDvIABdrP4bvV6PCGI_8EvsdsGUYhmfQNA/viewform?usp=sf_link</a>
2.	S.Y.B.Sc	Google Classroom	Drive	1. <a href="https://classroom.google.com/c/MzE1MjcxNjQwMjk5">https://classroom.google.com/c/MzE1MjcxNjQwMjk5</a> 2. <a href="https://classroom.google.com/c/MTE3NjA0Nzg4Mzg">https://classroom.google.com/c/MTE3NjA0Nzg4Mzg</a> 3. <a href="https://classroom.google.com/c/MTQzODgzNDI3NTQ">https://classroom.google.com/c/MTQzODgzNDI3NTQ</a> 4. <a href="https://classroom.google.com/c/NDQ1ODU4Njk2MjE1">https://classroom.google.com/c/NDQ1ODU4Njk2MjE1</a>
3.	S.Y.B.Sc	Test using Google form	Drive	1. <a href="https://docs.google.com/forms/d/e/1FAIpQLSfZynhNYTv5wHywdvovA-B6ynNVEyXOz_qDOj40004SwgAtZg/viewform?usp=sf_link">https://docs.google.com/forms/d/e/1FAIpQLSfZynhNYTv5wHywdvovA-B6ynNVEyXOz_qDOj40004SwgAtZg/viewform?usp=sf_link</a> 2. <a href="https://docs.google.com/forms/d/e/1FAIpQLScZr_tm7akeiTnn-uJ7I-JtB-YuHavWEMy9GZiy5tCP2a01w/viewform?usp=pp_url">https://docs.google.com/forms/d/e/1FAIpQLScZr_tm7akeiTnn-uJ7I-JtB-YuHavWEMy9GZiy5tCP2a01w/viewform?usp=pp_url</a>

**R. C. Patel Educational Trust's**  
**R. C. Patel Arts, Commerce and Science College Shirpur**  
**Department of Electronics**  
**The Details of ICT Pedagogy used in Teaching Learning Process**  
**For the academic year 2020-21**

Sr. No.	Contents	Type of ICTMaterial	Source	Links
1.	S.Y.B.Sc	Quiz	Drive	<a href="https://docs.google.com/forms/d/e/1FAIpQLSfx7prClfqHTDHnGpZ2SpFURIW4PaFWO6E3y3H2R4EbgHFyzA/viewform?usp=pp_url">https://docs.google.com/forms/d/e/1FAIpQLSfx7prClfqHTDHnGpZ2SpFURIW4PaFWO6E3y3H2R4EbgHFyzA/viewform?usp=pp_url</a>
2.	S.Y.B.Sc	Google Classroom	Drive	1. <a href="https://classroom.google.com/c/NDQ1ODU4Njk2MjE1">https://classroom.google.com/c/NDQ1ODU4Njk2MjE1</a> 2. <a href="https://classroom.google.com/c/NDQ3MDM2OTI4NTE0">https://classroom.google.com/c/NDQ3MDM2OTI4NTE0</a>
3.	S.Y.B.Sc	Test using Google form or Testmoz	Drive	1. <a href="https://docs.google.com/forms/d/e/1FAIpQLSci2rJEvv_TZiXaVYAk-nu9bnjd8s-GXnloz3VLO2dRFWyb-A/viewform?usp=sf_link">https://docs.google.com/forms/d/e/1FAIpQLSci2rJEvv_TZiXaVYAk-nu9bnjd8s-GXnloz3VLO2dRFWyb-A/viewform?usp=sf_link</a> 2. <a href="https://docs.google.com/forms/d/e/1FAIpQLScZr_tM7akeiTnn-uJ7I-JtB-YuHavWEMy9GZyiy5tCP2a01w/viewform?usp=pp_url">https://docs.google.com/forms/d/e/1FAIpQLScZr_tM7akeiTnn-uJ7I-JtB-YuHavWEMy9GZyiy5tCP2a01w/viewform?usp=pp_url</a> 4. <a href="https://docs.google.com/forms/d/e/1FAIpQLScZr_tM7akeiTnn-uJ7I-JtB-YuHavWEMy9GZyiy5tCP2a01w/viewform?usp=pp_url">https://docs.google.com/forms/d/e/1FAIpQLScZr_tM7akeiTnn-uJ7I-JtB-YuHavWEMy9GZyiy5tCP2a01w/viewform?usp=pp_url</a>

**R. C. Patel Educational Trust's**  
**R. C. Patel Arts, Commerce and Science College Shirpur**  
**Department of Electronics**  
**The Details of ICT Pedagogy used in Teaching Learning Process**  
**For the academic year 2021-22**

Sr. No.	Contents	Type of ICTMaterial	Source	Links
1.	S.Y.B.Sc	Quiz	Drive	<a href="https://docs.google.com/forms/d/e/1FAIpQLSdo_p2_QvFMS40bltFKjsQnLQR8tYzrvdc14mnzJRMCSMZ_Ow/viewform?usp=sf_link">https://docs.google.com/forms/d/e/1FAIpQLSdo_p2_QvFMS40bltFKjsQnLQR8tYzrvdc14mnzJRMCSMZ_Ow/viewform?usp=sf_link</a>
2.	S.Y.B.Sc	Google Classroom	Drive	1. <a href="https://classroom.google.com/c/NDQ1ODU4Njk2MjE1">https://classroom.google.com/c/NDQ1ODU4Njk2MjE1</a> 2. <a href="https://classroom.google.com/c/NDQ3MDM2OTI4NTE0">https://classroom.google.com/c/NDQ3MDM2OTI4NTE0</a>
3.	S.Y.B.Sc	Test using Google form or Testmoz	Drive	1. <a href="https://docs.google.com/forms/d/e/1FAIpQLSci2rJEVv_TZiXaVYAk-nu9bnjd8s-GXnloz3VLO2dRFWYb-A/viewform?usp=sf_link">https://docs.google.com/forms/d/e/1FAIpQLSci2rJEVv_TZiXaVYAk-nu9bnjd8s-GXnloz3VLO2dRFWYb-A/viewform?usp=sf_link</a> 2. <a href="https://docs.google.com/forms/d/e/1FAIpQLScZr_tM7akeiTnn-uJ7I-JtB-YuHavWEMy9GZyiy5tCP2a01w/viewform?usp=pp_url">https://docs.google.com/forms/d/e/1FAIpQLScZr_tM7akeiTnn-uJ7I-JtB-YuHavWEMy9GZyiy5tCP2a01w/viewform?usp=pp_url</a> 4. <a href="https://docs.google.com/forms/d/e/1FAIpQLScZr_tM7akeiTnn-uJ7I-JtB-YuHavWEMy9GZyiy5tCP2a01w/viewform?usp=pp_url">https://docs.google.com/forms/d/e/1FAIpQLScZr_tM7akeiTnn-uJ7I-JtB-YuHavWEMy9GZyiy5tCP2a01w/viewform?usp=pp_url</a>



**Department  
Of  
Mathematics**

**R. C. Patel Educational Trust's**

**R. C. Patel Arts, Commerce and Science College Shirpur**

**Student Centric Learning (Pedagogies Used)**

**Department of Mathematics**

**Pedagogy used for Teaching –**

Participatory Learning, Classroom Teaching, Interactive Sessions and Cutting-Edge Practice, Blended Learning, Flipped classroom.

**Tools and Materials used-**

- Blackboard or whiteboard
- Projectors.
- Computers for practical demonstrations
- PPTs.
- Teaching and learning resources- Reference Books /Text books, other references, films, radio programs, multimedia, digital learning resources including video, audio, animations and images, expert lectures
- Software used- MS Visio, Programming software, etc.

**Description of the Methods -**

- a. Teaching methods are the broader techniques used to help students achieve learning outcomes, while activities are the different ways of implementing these methods.
- b. Practical Work: all teaching and learning activities in the sciences in which the student is actively involved and that allow the mobilization of science processes skills and scientific knowledge and that may be materialized by paper and pencil activities or observing and/or manipulating materials.

**Outcomes (Learning Experience) -**

- **A strong sense of identity.**
- Connection to and contribution with their world.
- A strong sense of wellbeing.
- Confident and involved learners.
- Soft skills.
- Learning Computers & Management allows students to learn about the Programming concepts and gain skills as logical & critical thinking, problem-solving, management skills.

## Experiential Learning

Academic Year	Sr. No.	Method used	Content
2018-19	1.	Quiz	Mathematics

The „Quiz Competition“ organize by KBCNMU Jalgaon and R.C.Patel Arts, Commerce and Science college shirpur, in department of Mathematics on 22 December 2018 on the occasion of “National Mathematics Day 2018”.

### Quiz Competition 2018-19



<b>Academic Year</b>	<b>Sr. No.</b>	<b>Method used</b>	<b>Content</b>
<b>2019-20</b>	1.	Quiz	Mathematics

The „Quiz Competition“ organized by KBCNMU Jalgaon and R. C. Patel Arts, Commerce and Science College Shirpur in department of Mathematics on 22 December 2019 on the occasion of “National Mathematics Day 2019”.

### **Quiz Competition 2019-20**





Academic Year	Sr. No.	Method used	Content
2020-21	1.	Quiz	Mathematics

The „Quiz Competition“ organize by KBCNMU Jalgaon and R.C.Patel Arts, Commerce and Science college shirpur, in department of Mathematics on 22 December 2020 on the occasion of “National Mathematics Day 2020”.

### Quiz Competition 2020-21



Academic Year	Sr. No.	Method used	Content
2021-22	1.	Quiz	Mathematics


The „Quiz Competition“ organize by KBCNMU Jalgaon and R. C. Patel Arts, Commerce and Science College Shirpur, in department of Mathematics on 22 December 2021 on the occasion of “National Mathematics Day 2021”.

### Quiz Competition 2021-22

National Mathematics Day  
Quiz Competition

Department of Mathematics R.C.Patel Arts, Commerce and Science  
College, Shirpur

22 December 2021



Department of Mathematics (R.C.P Shirpur)      National Mathematics Day      22 December 2021 1 / 11

Solve this question in five minutes

Q.1

If  $x + \frac{1}{x} = 3$  then find  $x^3 + \frac{1}{x^3}$ .

Solve this question in five minutes

Q.2

Find the remainder when  
 $15x^4 - 16x^3 + 4x^2 - 5x + 19$  is divided by  
 $5x - 2$

Solve this question in five minutes

Q.3

Find the number such that half of it multiplied by one eighth of it equals the number 16.



Solve this question in five minutes

Q.4

The dogs and humans in a shelter have 46 eyes and 76 legs among them. How many dogs are in the shelter.







Academic Year	Sr. No.	Method used	Content
2022-23	1.	Quiz	Mathematics
	2.	Practical Experiments	MATLAB

The „Quiz Competition“ organize by KBCNMU Jalgaon and R. C. Patel Arts, Commerce and Science College Shirpur, in department of Mathematics on 22 December 2022 on the occasion of “National Mathematics Day 2022”.

### Quiz Competition 2022-23





## Practical Demonstration of MATLAB





## Participative Learning

Academic Year	Sr. No.	Method used	Content
2018-19	1.	Poster Presentations	Differential topics & Pythagoras topics

### Poster Presentation 2018-19



Academic Year	Sr. No.	Method used	Content
	2019-20	1.	Poster Presentations

**Poster presentation 2019-20**

The image shows a mobile application interface for a poster presentation. The poster content is as follows:

**MATHEMATICS**  
**POSTER PRESENTATION**  
**SUBJECT: RAMANUJAN MAGIC SQUARE**  
 PRESENTED BY: YOGITA PAWAR

**4x4 Magic Square:**

22	12	18	87
88	17	9	25
10	24	89	16
19	86	23	11

**Date Calculation Table:**

DD	MM	CC	YY
YY+1	CC-1	MM-3	DD+3
MM-2	DD+2	YY+2	CC-2

The background shows a meeting interface with a grid of participants:

S.O.Deore Mam	Department of...	Mali Bhumika
Rupali bharambe	Yogita Pawar	Tanuja Patil
SHUBHAM SHI...	Patil Dhanshri	Mirza Arshiyabi...
Vijaya Ahirrao	Hall	

## Poster Presentation

The screenshot shows a video conference interface with four participants: Snehal patil, Department of ..., S.O.Deore Mam, Suryawanshi pr..., and Baviskar Heman... The main content is a poster presentation on graph paper. The poster consists of four diagrams of rectangles, each divided into colored regions (red, green, yellow, blue) and labeled with mathematical terms:

- Top-left diagram: A rectangle divided into four regions (top-left green, top-right yellow, bottom-left red, bottom-right blue). Labels include 'Area', 'Perimeter', and 'Volume'.
- Top-right diagram: A rectangle divided into two regions (top-left red, rest green). Labels include 'Area', 'Perimeter', and 'Volume'.
- Bottom-left diagram: A rectangle divided into four regions (top-left yellow, top-right blue, bottom-left red, bottom-right green). Labels include 'Area', 'Perimeter', and 'Volume'.
- Bottom-right diagram: A rectangle divided into six regions (top-left yellow, top-middle green, top-right blue, middle-left red, middle-right green, bottom-right yellow). Labels include 'Area', 'Perimeter', and 'Volume'.

Academic Year	Sr. No.	Method used	Content
	2020-21	1.	Poster Presentations

**Poster Presentation 2020-21**

The image displays a collection of educational posters and a grid of names. On the left, three posters are visible:

- Poster 13:** Titled "Basketball", it discusses math concepts used in basketball, including force, angles, percentages, height, and ratios. It also mentions that in professional basketball, a game lasts 48 minutes, divided into four 12-minute quarters.
- Poster 14:** Titled "American Football", it lists math concepts used in football, such as positive and negative numbers, angles, and statistics.
- Poster 15:** Also titled "American Football", it further elaborates on how math is used in football, specifically mentioning angles and statistics.

To the right of the posters is a grid of names, likely representing the authors or presenters of the posters. The names are arranged in a 3x3 grid:

S.O. Deore Mam	Department of...	Patil Dhanshri
Rupali bharambe	Harsha Jamadar	Mali Bhumika
Yogita Pawar	Hall	Mirza Arshiyabi...
More Ruchika p...	Tanuja Patil	Vijaya Ahirrao



Academic Year	Sr. No.	Method used	Content
2021-22	1.	Poster Presentations	Differential topics

**Poster Presentation: 2021-22**

**RCPET**  
R.C.PATEL EDUCATIONAL TRUST

**Poster Presentation**

13 July 2021

Organized by

Department of Mathematics

In Association with

**IQAC**  
R.C.Patel Educational Trust's  
R.C.PATEL ARTS, COMMERCE &  
SCIENCE COLLEGE, SHIRPUR  
MAHARASHTRA

Registration Link:  
<https://forms.gle/VsgMujcrYTRgqYHu5>

**CREATIVE**  
MATH IDEA

**No Registration Fee**

## Organizing Committee

### CO-ORDINATOR

Prof. R. P. Mahajan

Head

Dept. of Mathematics

### CONVENER

Dr. D. R. Patil

(Principal)

R. C. Patel A. C. S. College,  
Shirpur

### ORGANIZING SECRETARY

Mr. Kartik. B. Rokade

## Organizing Committee members

Prof. G. S. Chaudhari

Ms. Rajashri R. Jadhav

Ms. Hemangini R. Chaudhari

**Poster presentation**









**Certificate of Participation by Poster Presentation**

R.C.Patel Arts, Science and Commerce  
College, Shirpur,  
Dist. Dhule, Maharashtra.



**CERTIFICATE OF PARTICIPATION**


THIS IS TO CERTIFIED THAT

**BAVISKAR HEMANT VASUDEO**

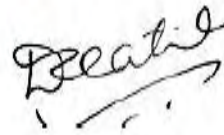
of R C Patel ASC College, Shirpur

FOR GOT **SECOND** RANK IN  
**POSTER PRESENTATION**

HELD ON 13<sup>TH</sup> JULY 2021.

  
Prof. R. P. Mahajan  
(Head of Department)



  
Dr. D. R. Patil  
(Principal)

R.C.Patel Arts, Science and Commerce  
College, Shirpur,  
Dist. Dhule, Maharashtra.



## CERTIFICATE OF PARTICIPATION

THIS IS TO CERTIFIED THAT

**BHARAMBE RUPALI LILADHAR**

of R C Patel ASC College, Shirpur

FOR GOT **THIRD** RANK IN

**POSTER PRESENTATION**

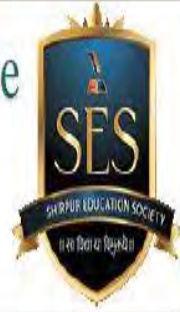
HELD ON 13<sup>TH</sup> JULY 2021.

Prof. R. P. Mahajan  
(Head of Department)



Dr. D. R. Patil  
(Principal)

R.C.Patel Arts, Science and Commerce  
College, Shirpur,  
Dist. Dhule, Maharashtra.



## CERTIFICATE OF PARTICIPATION

THIS IS TO CERTIFIED THAT

**MALI BHUMIKA DEVANAND**

of R C Patel ASC College, Shirpur

FOR GOT **SECOND** RANK IN

**POSTER PRESENTATION**

HELD ON 13<sup>TH</sup> JULY 2021.

Prof. R. P. Mahajan  
(Head of Department)



Dr. D. R. Patil  
(Principal)



R.C.Patel Arts, Science and Commerce  
College, Shirpur,  
Dist. Dhule, Maharashtra.



## CERTIFICATE OF PARTICIPATION

THIS IS TO CERTIFIED THAT

**MIRZA ARSHIYA SHAKEEL BAIG**

of R C Patel ASC College, Shirpur

FOR PARTICIPATING IN  
**POSTER PRESENTATION**

HELD ON 13<sup>TH</sup> JULY 2021.

Prof. R. P. Mahajan  
(Head of Department)



Dr. D. R. Patil  
(Principal)



R.C.Patel Arts, Science and Commerce  
College, Shirpur,  
Dist. Dhule, Maharashtra.



## CERTIFICATE OF PARTICIPATION

THIS IS TO CERTIFIED THAT

**PATIL SNEHAL SHAILESH**

of R C Patel ASC College, Shirpur

FOR GOT **FIRST** RANK IN  
**POSTER PRESENTATION**

HELD ON 13<sup>TH</sup> JULY 2021.

Prof. R. P. Mahajan  
(Head of Department)



Dr. D. R. Patil  
(Principal)

Academic Year	Sr. No.	Method used	Content
2022-23	1.	Poster Presentations	Differential topics

**Poster Presentation and Science day 2022-23**

**28th Feb  
NATIONAL  
SCIENCE  
DAY**

**RCPET**  
R.C.PATEL EDUCATIONAL TRUST

**CREATIVE  
MATH IDEA**

**SCIENCE  
FAIR 2K23**

**Organized by**  
Department of Mathematics

**In Association with**  
R. C. Patel Arts, Commerce  
and Science College,  
Shirpur.

**Organizing Committee**

**Convener**  
Dr. D. R. Patil  
Principal  
R. C. Patel ACS College, Shirpur.

**Co-ordinator**  
Dr. R. P. Mahajan

**28/02/2023**

**Registration Fee : Rs. 50**

Poster presentation





Academic Year	Sr. No.	Method used	Content
2018-19	1.	Ice-Breaking activity	Well-come function

Well-Come function:2018-19





Academic Year	Sr. No.	Method used	Content
2019-20	1.	Ice-Breaking activity	Well-come function

### Ice-Breaking activity



Academic Year	Sr. No.	Method used	Content
2020-21	1.	Ice-Breaking activity	Well-come function

Well-Come function:2020-21





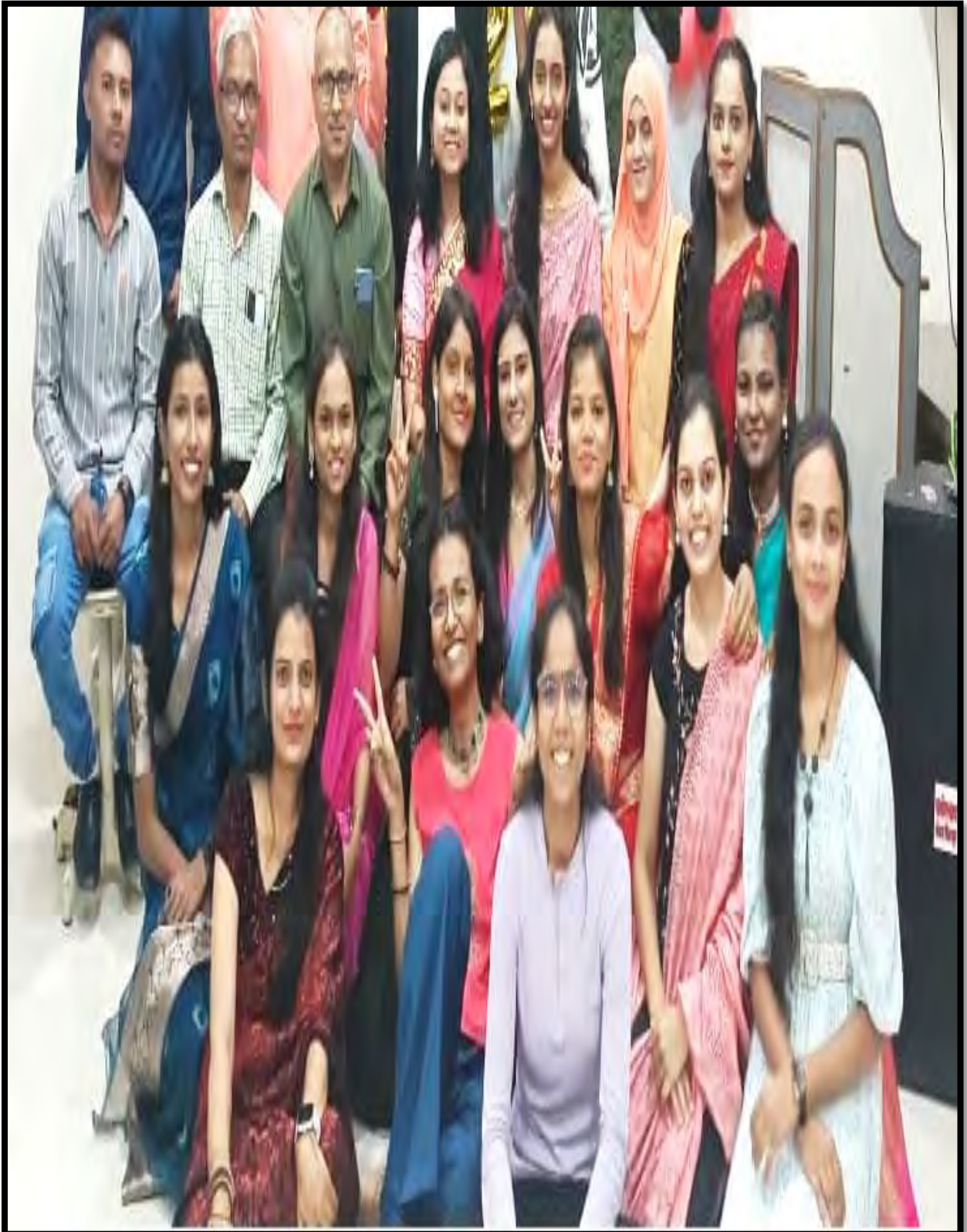
Academic Year	Sr. No.	Method used	Content
2021-22	1.	Ice-Breaking activity	Well-come function

**Well-Come function:2021-22**



Academic Year	Sr. No.	Method used	Content
2022-23	1	Ice-Breaking activity	Well-come function

Well-Come function:2022-23





**R. C. Patel Arts, Commerce and Science College Shirpur**

**ICT Enabled Teaching**

**Department of Mathematics**

**The Details of ICT Pedagogy used in Teaching Learning Process**

**For the academic year 2018-19 to 2022-23**

<b>Sr.No.</b>	<b>Contents</b>	<b>Type of ICT Material</b>	<b>Source</b>	<b>Links</b>
1.	S.Y.B.Sc	Google Classroom	Drive	<a href="mailto:rcpasclms1@gmail.com"><u>rcpasclms1@gmail.com</u></a>
2.	T.Y.B.Sc	Google Classroom	Drive	<a href="mailto:rcpasclms11@gmail.com"><u>rcpasclms11@gmail.com</u></a>
3.	M.Sc-I	Google Classroom	Drive	<a href="mailto:rcpasclms11@gmail.com"><u>rcpasclms11@gmail.com</u></a>
4.	M.Sc-II	Google Classroom	Drive	<a href="mailto:rcpasclms11@gmail.com"><u>rcpasclms11@gmail.com</u></a>

# Department of Botany

**Student Centric Learning (Pedagogies Used)**

**Department of Botany**

- **Pedagogy used for Teaching –**  
Participatory Learning, Classroom Teaching, Interactive Sessions and Cutting-Edge Practice, Blended Learning, Flipped classroom.
  
- **Tools and Materials used-**
  - I. Familiarize themselves with the type of audio-visual aids, techniques and methods of teaching required for teaching of biological science.
  - II. Evaluate students performance and provide remedial teaching.
  - III. Develop a broad understanding of biological science.
  - IV. Develop teaching competencies related to biological science at secondary level.
  
- **Description of the Methods -**
  - a . Make an observation.
  - b. Ask a question.
  - c. Form a hypothesis, or testable explanation.
  
- **Outcomes (Learning Experience) -**
  - 1: This course helps to make them aware of wild plants their habit and habitat from field tour.
  - 2: Connection to and contribution with their world.
  - 3: To the fundamentals of totipotency, plant tissue culture techniques.
  - 4: Students will aware about the basic concepts of biochemistry.
  5. Students will get the structure, composition of primary and secondary metabolites
  - 6: Soft skills.

## Experiential Learning

Academic Year 2021-22	Sr. No.	Method used	Content
	1.	Project Work	M.Sc. Final Year Project
	2.	Study Tour	Maheshwar

### 2021-22 Project Student List

Sr. No.	Name of students	Title of Project	Name of Project Guide
1.	Miss.Vasave Tejaswini Magan	Study of pollen grains of flowers from campus of R. C. Patel college	Ms. Yogita K. Girase
2.	Miss.Rajput Harshani Jitendra		
3.	Miss.Girase Divya Dhansing	Biodiversity of Aero-algae in Shirpur city	Mr. Yogesh S. Koli
4.	Miss.Nikam Jayashri Mahendra		
5.	Miss. Patil Poonam Sudam	Medicinal plant in Shirpur tahsil	Mr. Rohidas H. Pawara
6..	Miss. Borase Ashwini Dnyanshewar		
8.	Miss.Sonawane Dipmala Pundlik	Isolation of Soil fungi in Shirpur Tahsil	Mrs. V. S. Shelke
9.	Miss. Kalyani Vilas Marathe		
10.	Miss. Saner Tejaswini Yuvraj	Isolation of Soil fungi in Shirpur Tahsil	Mrs. V. S. Shelke
11.	Mr. Patil Prashant Hemaraj		
12.	Miss. Rajput Kiran Ranjit		



**Ms. Vijayalaxmi Shelke**  
**HOD**  
**Department of Botany**





## Study Tour at Maheshwar for Botanical Variation in Trees.



## Project Work



Academic Year 2022-23	Sr. No.	Method used	Content
	1.	Project Work	M.Sc. Final Year Project
2.	Industrial Visits / Tours	T.Y B.Sc, M.Sc., I & II Tour	

### Project Work



## CERTIFICATE

This is to certify that the present project work entitle “Medicinal plant” Is an original work carried out by Miss.Patil Priyanka Hemraj under my guidance and supervision at the Department of Botany R. C. Patel. Arts, Commerce and Science College, Shirpur, Dist- Dhule.

This work has not been submitted or published anywhere in the form of thesis or dissertation. We consider this work worthy for the partial fulfilment of degree of Master of Science in Botany.

*(Handwritten Signature)*  
02/06/2023

(Mr Yogeshwar S. Koli)

Guide

Date: 02/06/23

Place: Shirpur





Project Work



CERTIFICATE

This is to certify that the present project work entitle "Preliminary Survey of The Anti -Arthritic Potential Plants of SES Urban" Is an original work carried out by Miss.Patil Priyanka Hemraj under my guidance and supervision at the Department of Botany R. C. Patel. Arts, Commerce and Science College, Shirpur, Dist- Dhule.

This work has not been submitted or published anywhere in the form of thesis or dissertation. We consider this work worthy for the partial fulfilment of degree of Master of Science in Botany.

*Shelke*  
01/06/23  
(Mrs. Vijayalaxmi S. Shelke)  
Head, Department of Botany

Date: 01/06/23

Place: Shirpur

*Patil*  
2.6.2023  
*Shelke*  
02.06.23



## CERTIFICATE

This is to certify that the work contained in the project entitled “Floristic Survey of Angiosperm Families of Natural Vegetation of Shirpur” submitted by Ms. Solanki Priti Jagan for the award of the degree of M.Sc Botany to the R. C. Patel Arts, Commerce & Science College, Shirpur, is a record of bonafide research works carried out by her under my guidance.

I considered that the project dissertation has reached the standards and fulfilled the requirements of the rules and regulations relating to the nature of the degree. The contents embodied in the project dissertation have not been submitted for the award of any other degree or diploma in this or any other university.

Date: 2/05/2023

Place: Shirpur

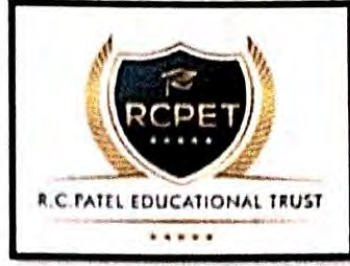


(Mr. Rohidas H. Pawara)

Signature & Name of Guide







## CERTIFICATE

This is to certify that the work contained in the project entitled “Floristic Survey of Angiosperm Families of Natural Vegetation of Urbanised Shirpur” submitted by Ms. Solanki Priti Jagan for the award of the degree of M.Sc Botany to the R. C. Patel Arts, Commerce & Science College, Shirpur, is a record of bonafide research works carried out by her under my supervision.

I considered that the project dissertation has reached the standards and fulfilled the requirements of the rules and regulations relating to the nature of the degree. The contents embodied in the project dissertation have not been submitted for the award of any other degree or diploma in this or any other university.

Date : 2/05/2023

Place : Shirpur



*Vijayalaksmi Shelke*  
02/05/23

(Vijayalaksmi Shelke)

Head, Department of Botany

*CPJ*  
2.6.2023 Subitil  
02.06.23



## CERTIFICATE

This is to certify that the present project work entitle “ISOLATION OF SOIL FUNGI FROM SHIRPUR TALUKA” Is an original work carried out by Miss Patel Yamini Chandrakant under my guidance and supervision at the Department of Botany R. C. Patel Arts, Commers and Science College, Shirpur, Dist- Dhule.

This work has not been submitted or published anywhere in the form of thesis or dissertation. We consider this work worthy for the partial fulfilment of degree of Master of Science in Botany.

(Mrs Suruchi A.Sharma)

Guide

Date: 09/05/2023

Place: Shirpur





## CERTIFICATE

This is to certify that the present project work entitle "ISOLATION OF SOIL FUNGI FROM SHIRPUR TALUKA" Is an original work carried out by Miss. Patel Yamini Chandrakant under my guidance and supervision at the Department of Botany R. C. Patel Arts, Commers and Science College, Shirpur, Dist- Dhule.

This work has not been submitted or published anywhere in the form of thesis or dissertation. We consider this work worthy for the partial fulfilment of degree of Master of Science in Botany.

*Wheuke*

(Mrs. Vijayalaxmi S. Shelke)

Head, Department of Botany

Date: 09/05/2023

Place: Shirpur

*Shelke*  
12.6.2023  
*S. Patil*  
02.06.23





## Experimental Work



## Practical Demonstration at Botany Lab





### Project List 2022-23

Sr. No.	Name of students	Title of Project	Name of Project Guide
1.	Patil Yamini Chandrakant	Isolation of Rhizospear Fungi	Ms. Suruchi A. Sharma
2.	Mahajan Neha Yuvaraj		
3.	Suryawanshi Durgeshwari Sanjay	Isolation of Endophytic Fungi from Shirpur Taluka	Mr. Hemant A. Wagh
4.	Mahale Harshada Suresh		
5.	Patil Dipali Dnyaneshwar	Study of Various Plants of Apocynaceae Family and Their Medicinal Uses	Mr. Rohidas H. Pawara
6.	Goyakar Devidas Krushna		
7.	Patil Priyanka Hemaraj	Medicinal Plants	Mr. Yogesh S. Koli
8.	Pawara Hira Bila		
9.	Patil Riken Kantilal	Extraction Pectin from Orange Fruit Peels	Mrs. V. S. Shelke
10.	Pawara Sangita Bhavsing		
11.	Barela Nita Birsing		
12.	Wagh Sapana Dnyaneshwar	Formulations and evaluation of Herbal Face Pack Using Herbal	Mrs. Shital M. Tawade
13.	Wagh Aarati Shaligram		
14.	Behare Bhagyashri Vasantrao		
15.	Kadi Madhura Rajendra	Anatomical Study of Certain of The Family Cucurbitaceae	Mrs. Shital M. Tawade
16.	Pawar Shubhangi Vallabh		

17.	Patil Sunita Sunil		
18.	Solanki Priti Jagan	Floristic Survey of Angiosperm Families of Natural Vegetation of Urbanised Shirpur	Mr. Rohidas H. Pawara



**Ms. Vijayalaxmi Shelke**  
**HOD**  
**Department of Botany**



## Practical Preparation at Botany Lab



**Project Work 2022-23**





## Project Work



## Project Work





## Participative Learning

Academic Year 2021-22	Sr. No.	Method used	Content
	1.	Group Discussion	Group Discussion on Ecology
	2.	Poster Presentations	Poster presentation on medicinal plants

### Group Discussion on Ecology



### Poster Presentations





## Poster Presentation Inuagrations



## Poster Presentation



Academic Year 2022-23	Sr. No.	Method used	Content
	1.	Group Discussion	Botanical Variation in Trees
	2.	Poster Presentations	Innovations in science

### Poster Presentations on Innovations in science





## Problem Solving

Academic Year	Sr. No.	Method used	Content
2020-21	1.	Expert Talk	Career Counselling

### Expert Talk on Career Counselling



**R. C. Patel Educational Trust's**  
**R. C. Patel Arts, Commerce and Science College Shirpur**  
**Department of Botany**  
**The Details of ICT Pedagogy used in Teaching Learning Process**  
**for the academic year 2018-19 To 2022-23**

Sr.No.	Contents	Type of ICTMaterial	Source	Links
1.	Angiospem	Audio Lecture	Drive	<a href="https://drive.google.com/file/d/1ROI_chKDFfmj1fyUzqVTDqODJQ-9xdgR/view?usp=sharing">https://drive.google.com/file/d/1ROI_chKDFfmj1fyUzqVTDqODJQ-9xdgR/view?usp=sharing</a>
2.	Plant Physiology	Video Lecture	Drive	<a href="https://drive.google.com/file/d/1yHn1pmRek7Ou2a61QEQO5m7Ro4Yx7b8Q/view?usp=drivesdk">https://drive.google.com/file/d/1yHn1pmRek7Ou2a61QEQO5m7Ro4Yx7b8Q/view?usp=drivesdk</a>
3.	Angiospem	You-tube Video	Drive	<a href="https://drive.google.com/file/d/1grYVZuvnARM642v2l99ytQWu5NWPRryU/view?usp=sharing">https://drive.google.com/file/d/1grYVZuvnARM642v2l99ytQWu5NWPRryU/view?usp=sharing</a>
4.	Test	Google Meet	Drive	<a href="https://docs.google.com/forms/d/1EN5bfjo7KugYU7A7VkulVE0He7DZ9TCLOcZ3PA5k06s/edit?usp=drivesdk">https://docs.google.com/forms/d/1EN5bfjo7KugYU7A7VkulVE0He7DZ9TCLOcZ3PA5k06s/edit?usp=drivesdk</a>
5.	Introduction of Botany	Google Classroom	Drive	<a href="https://classroom.google.com/c/NDQ5NTMwMzI2MDUx?cjc=hdmspfx">https://classroom.google.com/c/NDQ5NTMwMzI2MDUx?cjc=hdmspfx</a>
6.	Test	Test using Google form or Testmoz	Drive	<a href="https://docs.google.com/forms/d/14MgVluPvh8b9NQuQonukFXTeFka2hd7GPXIhbQpzOFA/edit?usp=drivesdk">https://docs.google.com/forms/d/14MgVluPvh8b9NQuQonukFXTeFka2hd7GPXIhbQpzOFA/edit?usp=drivesdk</a>
7.		PPT	Drive	<a href="https://drive.google.com/file/d/1AMsa-P0OzP0E2dlSEo_TYrpq0l7sl8y5/view?usp=sharing">https://drive.google.com/file/d/1AMsa-P0OzP0E2dlSEo_TYrpq0l7sl8y5/view?usp=sharing</a>
8.	Theory	Smartboard Use		For lecture as well as practicals

# **Department of Zoology**

**Student Centric Learning (Pedagogies Used)  
Department of Zoology**

- **Pedagogy used for Teaching –**

Participatory Learning, Classroom Teaching, Interactive Sessions and Cutting-Edge Practice, Blended Learning, Flipped classroom.

- **Tools and Materials used-**

- a. Blackboard or whiteboard
- b. Projectors.
- c. Computers for practical demonstrations
- d. PPTs.
- e. Teaching and learning resources- Reference Books /Text books, other references, digital learning resources including video, audio, animation and images, expert lectures

- **Description of the Methods -**

1 Teaching methods are the broader techniques used to help students achieve learning outcomes, while activities are the different ways of implementing these methods.

2 Practical Work: all teaching and learning activities in the sciences in which the student is actively involved and that allow the mobilization of science processes skills and scientific knowledge. Temporary preparation of materials for light microscopy can be made for quick preliminary investigation. A number of stains may be used for staining purpose.

3. A microtome is used to make thin slices of tissue. The cut tissue is floated over a water bath, in order to eliminate wrinkles and distortion in the tissue, and picked up on a slide.

- **Outcomes (Learning Experience) –**

1. Learning outcomes describe the measurable skills, abilities, knowledge or values that students should be able to demonstrate as a result of a completing a course.

2. Creating a connection between teaching and learning, between professors and students

3. Enabling them to truly master the content of the course.

4. To gain a more complete understanding of their intended learning outcomes.



## Experiential Learning

Academic Year 2018-19	Sr. No.	Method used	Content
	1.	Project Work	M.Sc Project

### Project Work

  
R.C.PATEL EDUCATIONAL TRUST  
\*\*\*\*\*  
**CERTIFICATE**

This is to certify that **Prashant Kailas Mali** form T.Y.B.Sc.Zoology has satisfactori carride out project work On “ **Type of Poultry Breeds** ” and submitted the report in the Premises of Department of Zoology under the guidance  
Of Prof.Dr.M.C.Agale during year 2018-2019

Date:

Place:-Shirpur

Internal Examiner:-

External Examiner:- 

Project Guide:-Dr.M .C. Agale

  
**Head**  
Department of Zoology  
R.C. Patel Arts, Com. & Sci. College  
Department of Zoology  
R.C.Patel Arts, Commerce and  
Science Shirpur Dist-Dhule.

2

Project Work

**CERTIFICATE**

This is to certify that the Project Report Titled  
**Identification of birds in shirpur area** For T.Y.B.Sc is a Work carried  
out by "Sayyed Farhatnaaz Sajidali" Of T.Y.B.Sc Zoology of  
R.C.Patel Art, Commerce and Science College Shirpur For fulfilment  
of B.sc Course Of North Maharashtra University Jalgaon Under Our  
Supervision in the Department Of zoology In the Academic Year-  
2018-2019.

Date- 12/3/2019

Place-

Internal Examiner-

External Examiner- *[Signature]*  
25.3.19

Project Guide- Dr.M.C.Agale.



*[Signature]*  
Head  
Department of Zoology  
R.C. Patel Arts, Com. & Sci. College  
Shirpur, Jalgaon

R.C.Patel ACS College Shirpur.

## Project Work

### CERTIFICATE

This is certify that the project report on "Breeds of Dairy Cattle" From T.Y.Bsc is a work carried out by Ms. Agale Trupti Rajendra From Ty.Bsc Zoology of R.C.Patel Arts, Commerce and Science College Shirpur For fulfilment of Bsc Course K.B.C. North Maharashtra University Jalgaon Under our supervision in the department of Zoology In the Academic Year 2018-2019

Date:

Place: Shirpur

Internal Examiner:

External Examiner:

Project Guide: Dr.M.C.Agale



*Handwritten signature and date: 25.3.19*



*Handwritten signature of the Head of Department*

Head  
Department of Zoology  
R.C. Patel Arts, Com. & Science College  
Shirpur, Dist. Dhule  
R.C. Patel ACS College Shirpur

**Project Work**

**CERTIFICATE**

This to Certify That The Project Report Title *Goat Farming* For T.Y.Bsc is a Work Carried Out By "Ms.khatik Minaj Sadik" Of T.Y.Bsc Zoology of R.C.Patel Arts, Commerce and Science College Shirpur For Fulfilment of BSC Course Of North Maharashtra University Jalgaon Under Our Supervision In The Department of Zoology In The Academic Year 2019-2020

Date: 12/13/2019

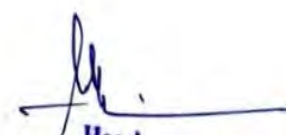
Place:

Internal Examiner:

External Examiner:  25.3.19

Project Guide: Dr.M.C.Agale





Head  
Department of Zoology  
R.C.Patel Arts, Com. & Sci. College  
Shirpur, Dist. Dhule  
R.C. Patel ACS College Shirpur.





## CERTIFICATE

**This is to certify that the the Project titled  
“IDENTIFICATION OF SPIDERS IN SHIRPUR” for  
T.Y. B.SC(ZOOLOGY) Is a work carried out by  
Ms. Prajakta Shivram Patole of T.Y. B.sc Zoology  
of R.C. Patel Arts, Commerce and Science  
College, Shirpur for fulfillment of B.sc course of  
North Maharashtra University, Jalgaon under our  
supervision in the Department of Zoology, in the  
Academic Year : 2018-2019**

**DATE:** 12.03.2019

**PLACE:**

**INTERNAL EXAMINOR**

**EXTERNAL EXAMINOR**

•  
•



**HEAD**  
Department of Zoology  
R.C. Patel Arts, Com. & Sci. College  
Shirpur, Dist. Dhule

R.C. PATEL Art's,

Commerce & Science college Shirpur.  
Dist- Dhule

	Sr. No.	Method used	Content
Academic Year 2019-20	1.	Field Work	Bird Watching Program at Anerdam Wildlife Sanctuary
	2.	Industrial Visits	Biodiversity of Anerdam Wildlife

### Project Work

R.C.Patel Arts, Commerce & Science College SHIRPUR

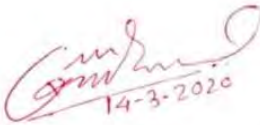
**CERTIFICATE**

This is to certify that **WADILE SHARLITA SHARADCHANDRA** from T.Y.B.sc. Zoology has satisfactorily carried out project work on **Study on Snakes in India** and submitted the report in the premises of Department of Zoology under the guidance of Dr. Mahendra.C. Agale during year ~~2019-2020~~

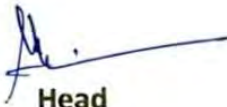
Date: 13 / 02 / 2020

Place : Shirpur


Internal Examiner :

External Examiner :   
14-3-2020

Project Guide : Dr. M.C. Agale

  
**Head**  
**Head**  
Department of Zoology  
R. C. Patel Arts, Com. & Sci. College,  
Shirpur, Dist. Dhule

Department of Zoology  
R.C.Patel Arts, Commerce & Science College  
Shirpur



## Project Work

### CERTIFICATE

This is to certify that **MAHAJAN KALYANI ARUN** from B.sc (Zoology) has satisfactorily carried out project work on "**VIRAL DISEASES-SYMPTOMS,PREVENTION AND TREATMENT**" and submitted the report in the premises of Department of zoology under the guidance of Prof.M.C.Agale during the year 2019-20

Date:13/02/2020

Place:Shirpur

Internal Examiner:

*[Signature]*  
14.3.20

External Examiner:

*[Signature]*  
14.3.2020

Project Guide:-Dr.M.C.Agale



*[Signature]*

**HEAD**  
Department of Zoology  
R.C.Patel Arts, Com. & Sci. College,  
Shirpur, Dist. Dhule  
Department of zoology

**R.C.Patel Arts,Commerce and Science College,Shirpur.**

**Dist-Dhule**



1. Biodiversity of Anerdam Wildlife Sanctuary and surroundings
2. Bird Watching Program at Anerdam Wildlife Sanctuary.





Academic Year	Sr. No.	Method used	Content
2020-21	1.	Field Work	Poultry Farm
	2.	Expert Talk	Biodiversity

**Field Work - Visit to Poultry Farm.**



**Expert Talk- Biodiversity**



**Expert Talk- Biodiversity**





Academic Year 2021-22	Sr. No.	Method used	Content
	1.	Project Work	Project List M.Sc.-II

## Project Work



**The Shirpur Educational Trust (RCPET) R.C.Patel. ASC College**  
**Shirpur, Dist – Dhule. (M.S.)**

**Department of Zoology**

**CERTIFICATE**

This is certify that **NEHA CHANDRAKAN SONAR** from Msc (Zoology) has satisfactorily carried our project work on “**STUDIES OF BIRDS FOUND IN SHIRPUR**” and submitted the report in the premises of Department of zoology under the guidance of **Dr. M.C.Aagle** during the academic year 2021-22 .


Date: \_\_\_\_\_ Place: Shirpur

**Dr.M.C.Aagle    Internal Examiner    External Examiner**



Project Work

  
R. C. PATEL EDUCATIONAL TRUST  
\*\*\*\*\*


**The Shirpur Educational Trust (RCPET)**  
**R. C. Patel. ASC College**  
**Shirpur, Dist. Dhule. (M.S.)**


**Department of Zoology**


**CERTIFICATE**

This is to certified that the project entitled **Agricultural Pest In Shirpur Area** has been satisfactory carried out by **Patil Rajeshri Sanjay** of M. Sc class under the guidance of **Dr. M. C. Aagle** during the academic year 2021-22


Date: \_\_\_\_\_ Place: Shirpur

  
**Dr. M. C. Aagle**  
Guide  
(H.O.D)

  
**Internal Examiner**

  
**External Examiner**

1







**THE SHIRPUR EDUCATION TRUST (RCPET)  
R. C. PATEL ASC COLLEGE,  
SHIRPUR, DIST. DHULE. (M.S.)**



**DEPARTMENT OF ZOOLOGY**

**CERTIFICATE**

This is to certified that the project work entitled "Estimation of Vitamin C from different sources" has been satisfactory carried out by Patil Nutan Bhatu of M.Sc class under my guidance and supervision at the Dept. of Zoology RCPCS.

This work has not been submitted or published anywhere in the form of thesis or dissertation. I consider this work for the partial fulfilment of degree master of science in Zoology.

Date:

  
Dr. M.C. Aagle (H.O.D)

  
Internal Examiner

Place: Shirpur

  
External Examiner





THE SHIRPUR EDUCATIONAL TRUST (RCPET)  
R. C. PATEL. ASC COLLEGE  
SHIRPUR, DIST. DHULE. (M.S.)

**Department of Zoology**

**CERTIFICATE**

This Is To Certified That The Project Entitled Study Of Indian Owls Has Been Satisfactory Carried Out By Pawara Manisha Shendya Of M. Sc Class Under The Guidance Of Dr. M. C. Aagle During The Academic Year 2021-22

**Date:** / /2022

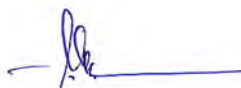
**Place:** Shirpur

Dr. Aagle Sir Internal Examiner External Examiner Guide  
(H.O.D)



### Project List M.Sc.-II 2021-22

Sr. No.	Name of Students	Project title	Name of Project Guide
1.	Chaudhari Dhavantari Sanjay	Indian Butterflies and their species	Dr. M. C. Agale
2.	Jadhav Yogandhara Kiran	Study of Commercial poultry egg layers	Dr. M. C. Agale
3.	Mahajan Kalyani Arun	Viral Diseases	Dr. M. C. Agale
4.	Mali Mansi Subhash	Fish Diversity in Shirpur Market	Dr. M. C. Agale
5.	Patil Sonal Nimba	Role of Honey bee in Agriculture	Dr. M. C. Agale
6.	Patil Sunita Nimba	Sickel Cell Anemia in Nandurbar District	Dr. M. C. Agale
7.	Patil Rajeshree Sanjay	Agricultural Pest in Shirpur	Dr. M. C. Agale
8.	Pawara Manisha Shendya	Study of Indian Owl	Dr. M. C. Agale
9.	Sonawane Mohini P	Study of Domestic Goat Breeds	Dr. M. C. Agale
10.	Sonar Neha Chandrakant	Study of Birds in Shirpur	Dr. M. C. Agale
11.	Wadile Shrlita Sharad	Study of Poisonous Snake in Shirpur	Dr. M. C. Agale
12.	Patil Nutan Bhatu	Estimation of Vit C	Dr. M. C. Agale
13.	Pawara Ajay Darasing	Study of Mosquito Species	Dr. M. C. Agale



**Dr. M. C. Agale**

**HOD**

**Department of Zoology**





Poster presentation Work- महिलासक्षमीकरणवमहिलासुरक्षा" पोस्टर्सकॉम्पिटिशन



Academic Year	Sr. No.	Method used	Content
2022-23	1.	Industrial Visits	Visit to water filtration plant Educational Tour
	2.	Project Work	Project M.Sc.-II

## Project Work



**The Shirpur Educational Trust (RCPET)**  
**R. C. Patel. ASC College Shirpur Dist Dhule.(M.S)**


**CERTIFICATE**

This is to certified that the project entitled has been satisfactory carried out by Ajay Himmat Valvi of M.Sc class under the guidance of Dr. Vandana Patil during the academic year 2022-2023


Date:




Place: Shirpur



**Dr. Vandana Patil**



**Dr. M.C. Agale**  
Head  
Department of Zoology  
R. C. Patel Arts, Com. & Sci. College  
Shirpur, Dist. Dhule



**External Examiner**  
Dr. Soudabete H.S.

2 | Page



**R.C. PATEL COLLEGE SHIRPUR**

**CERTIFICATE**

This Is to Certify that presen project work entitled, "INVESTIGATION THE RICHNESS O F SPIDER SPECIES IN MAHARASHTRA" is a project work carried out by AJAY RAMESH JADHAV under my guidance and supervision at the department of Zoology R. C .PATEL COLLEGE, SHIRPUR.

This work has not been Submitted or Published anywhere in the form of thesis or dissertation. I consider this work worthy for the partial fulfilment of degree of Master of Science in Zoology

Dr. M.C Agale

Head

Department of Zoology  
R.C. Patel Arts, Com. & Sci. College  
Shirpur Dist. D. D. D.

Department of Zoology

R.C.PATEL COLLEGE

SHIRPUR

Mrs. Surekha K. Kurankar

Project Guide,

Department of Zoology

R.C.PATEL COLLGE

SHIRPUR







**Shirpur Education Society's  
R. C. Patel ACS college, Shirpur  
Dist. Dhule. (M. S.)  
Department of zoology**

**Certificate**

**This is to certify that the Special Study entitled "Effects of Fertilizer on Soil" has been carried out by Nilam Shivaji Jamadar of M.Sc class under the guidance of Dr M.C.Agale during the A. Y. 2022-23.**

**Date:**

**Place: Shirpur**

**Dr M.C. Agale  
Head**

**Department of Zoology  
R.C. Patel Arts, Com. & Sci. Colleg.  
Shirpur, Dist. Dhule**

**Internal Examiner**

**External Examiner**







**The Shirpur Educational Trust(RCPET)  
R. C. Patel. ASC College  
Shirpur Dist Dhule.(M.S)**

**CERTIFICATE**


This is to certified that the project entitled **Production Of Biofertilizers** has been satisfactory carried out by **Bhavesh Balu Patil** of M.Sc class under the guidance of **Surekha K. Kurankar** during the academic year 2022-2023

**Date:**

**Place: Shirpur**

  
**Surekha K. Kurankar**

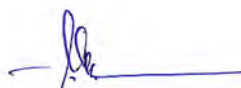
  
**Dr. M.C. Agale**

  
**External Examiner**  
**Dr. Sadoofule H. G.,**



### Project List M.Sc.-II 2022-23

Sr. No.	Name of Students	Project Title	Name of Project Guide
1.	Borse Pranali Jagdish	Estimation of Vitamin C Sources	Dr. M. C. Agale
2.	Gangawane Vivek Umesh	Study of Poultry Breeds and their Management	Dr. M. C. Agale
3.	Gavit Dipali Vasant	Role of Honey Bee in agriculture	Dr. M. C. Agale
4.	Jadhav Ajay Ramesh	Investigating the Richness of Spider Species in Maharashtra	Dr. M. C. Agale
5.	Jamadar Nilam Shivaji	Effect of Fertilizer on soil	Dr. M. C. Agale
6.	Kuwar Pooja Santosh	Study of Common Viral Diseases in Human	Dr. M. C. Agale
7.	Mahale Arun Sitaram	Awareness of sickle Cell diseases and Prevention of Sickle Circes in Patients	Dr. M. C. Agale
8.	More Mayuri Bhikanrao	Grain Shield: Effective Pest Control Measures for Stored Grains	Dr. M. C. Agale
9.	Patil Bhavesh Balu	Production of Biofertilizers	Dr. M. C. Agale
10.	Pawara ArunManilal	The Wonder of Bird migration in Maharashtra	Dr. M. C. Agale
11.	Sapkal Aniket Baban	Study of venomous and Non-venomous Snakes in Maharashtra	Dr. M. C. Agale
12.	Valvi Ajay Himmat	Study of Fish diversity in Shirpur	Dr. M. C. Agale
13.	VasaveYahoshvaSubhash	Study of History of Fresh Water Fish Channa striata	Dr. M. C. Agale
14.	WaradeHimani Anil	Commercial Goat Farming in Maharashtra	Dr. M. C. Agale



**Dr. M. C. Agale**

**HOD**

**Department of Zoology**



## Demonstration of Instruments at Zoology Lab





## Demonstration of Instruments at Zoology Lab





## Industrial Visits at Water filtration plant



**R. C. Patel Educational Trust's**  
**R. C. Patel Arts, Commerce and Science College Shirpur**  
**Department of Zoology**  
**The Details of ICT Pedagogy used in Teaching Learning Process**

**For the academic year 2018-19 to 2022-23**

<b>Sr. No.</b>	<b>Content</b>	<b>Types of ICT Material</b>	<b>Source</b>	<b>Link</b>
1.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/m/OTA3NzA5Njc4Mjla/details">https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/m/OTA3NzA5Njc4Mjla/details</a>
2.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/m/OTA3NzA5Njc4ODFa/details">https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/m/OTA3NzA5Njc4ODFa/details</a>
3.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/m/OTgyOTQwNzg4MDRa/details">https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/m/OTgyOTQwNzg4MDRa/details</a>
4.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/m/MzM3MTM0NzE2NjNa/details">https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/m/MzM3MTM0NzE2NjNa/details</a>
5.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/m/MzM3MTM0NzE3NDBa/details">https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/m/MzM3MTM0NzE3NDBa/details</a>
6.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjYyNjM5Mzi0MjM3/details">https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjYyNjM5Mzi0MjM3/details</a>
7.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjYyNjk4MzI2OTQ2/details">https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjYyNjk4MzI2OTQ2/details</a>
8.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjM0NDMwMTg4OTk4/details">https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjM0NDMwMTg4OTk4/details</a>
9.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjIzOTIwNTEwMDMz/details">https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjIzOTIwNTEwMDMz/details</a>
10.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjIzMDcyNDU5MDU3/details">https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjIzMDcyNDU5MDU3/details</a>
11.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/p/NDQ5ODA3MTc0ODUz/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/p/NDQ5ODA3MTc0ODUz/details</a>
12.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/p/NDQ5NjM5MDMzOTQ0/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/p/NDQ5NjM5MDMzOTQ0/details</a>
13.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/p/NDQ2Njc4NzEzMzU0/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/p/NDQ2Njc4NzEzMzU0/details</a>
14.	S.Y.B.Sc	Google	Drive	<a href="https://classroom.google.com/c/MjcwODc5">https://classroom.google.com/c/MjcwODc5</a>

		Classroom		<a href="https://classroom.google.com/c/MzI2NzJa/p/MzYwMzgzMjE2NzQx/details">MzI2NzJa/p/MzYwMzgzMjE2NzQx/details</a>
15.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/a/Mjg1MzYxNDY4MTEz/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/a/Mjg1MzYxNDY4MTEz/details</a>
16.	S.Y.B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/p/MjQyMDU2MzcwNjUy/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/p/MjQyMDU2MzcwNjUy/details</a>
17.	M.Sc. I	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjgzOTk5OTY0NjM1/p/NDQ3MjExODM4ODcw/details">https://classroom.google.com/c/MjgzOTk5OTY0NjM1/p/NDQ3MjExODM4ODcw/details</a>
18.	M.Sc. I	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjgzOTk5OTY0NjM1/p/NDMxNDk5NTAxMDAy/details">https://classroom.google.com/c/MjgzOTk5OTY0NjM1/p/NDMxNDk5NTAxMDAy/details</a>
19.	M.Sc. I	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjgzOTk5OTY0NjM1/p/NDQ2Njk4NzkwMzg3/details">https://classroom.google.com/c/MjgzOTk5OTY0NjM1/p/NDQ2Njk4NzkwMzg3/details</a>
20.	M.Sc. I	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjgzOTk5OTY0NjM1/p/NDQ2Njk2NDg3ODU0/details">https://classroom.google.com/c/MjgzOTk5OTY0NjM1/p/NDQ2Njk2NDg3ODU0/details</a>
21.	M.Sc. I	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjgzOTk5OTY0NjM1/p/NDQ2Njk2NzcxNzY5/details">https://classroom.google.com/c/MjgzOTk5OTY0NjM1/p/NDQ2Njk2NzcxNzY5/details</a>
22.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/a/Mjg1MzYxNDY4MTEz/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/a/Mjg1MzYxNDY4MTEz/details</a>
23.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MTI1MDY1NzQ1MTg2/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MTI1MDY1NzQ1MTg2/details</a>
24.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/OTkyMzUxNzI5ODIa/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/OTkyMzUxNzI5ODIa/details</a>
25.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/OTkyMzUxNzI4MjVa/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/OTkyMzUxNzI4MjVa/details</a>
26.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/OTkyMzUxNzI3OTFa/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/OTkyMzUxNzI3OTFa/details</a>
27.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/OTkyMzQ4NzQ3MjFa/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/OTkyMzQ4NzQ3MjFa/details</a>
28.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/NjYwMDEwMTU0MDBa/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/NjYwMDEwMTU0MDBa/details</a>
29.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcxMDE4NzI3ODda/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcxMDE4NzI3ODda/details</a>
30.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcwOTI3NzU2MTha/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcwOTI3NzU2MTha/details</a>



31.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcwOTY4MzkwNzBa/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcwOTY4MzkwNzBa/details</a>
32.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcwOTY4MzkwNTFa/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcwOTY4MzkwNTFa/details</a>
33.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcwOTY4MzkwNDNa/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcwOTY4MzkwNDNa/details</a>
34.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcwOTY4Mzg2MzZa/details">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcwOTY4Mzg2MzZa/details</a>
35.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcwOTE0NjMzMTla/detail">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MjcwOTE0NjMzMTla/detail</a>
36.	M.Sc.	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjgzOTk5OTY0NjM1/p/NDQ1ODY3NjUzMTQ3/details">https://classroom.google.com/c/MjgzOTk5OTY0NjM1/p/NDQ1ODY3NjUzMTQ3/details</a>
37.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjgzOTk5OTY0NjM1/m/MjkzNDk1MjI5NDgw/details">https://classroom.google.com/c/MjgzOTk5OTY0NjM1/m/MjkzNDk1MjI5NDgw/details</a>
38.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjgzOTk5OTY0NjM1/m/MjkzNDk0NDEyMDEx/details">https://classroom.google.com/c/MjgzOTk5OTY0NjM1/m/MjkzNDk0NDEyMDEx/details</a>
39.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjgzOTk5OTY0NjM1/m/MjkzNDk0NDEyMDEx/details">https://classroom.google.com/c/MjgzOTk5OTY0NjM1/m/MjkzNDk0NDEyMDEx/details</a>
40.	S Y B Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjYyNjk4MzI2OTQ2/detail">https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjYyNjk4MzI2OTQ2/detail</a>
41.	S Y B Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjM1NzQxNzQyNDQ1/detail">https://classroom.google.com/c/MjcwOTY2Mjc1NjBa/p/MjM1NzQxNzQyNDQ1/detail</a>
42.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/OTAwMzQyNjg2MTJa/detail">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/OTAwMzQyNjg2MTJa/detail</a>
43.	T Y B.Sc	Google Classroom	Drive	<a href="https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MzI3MzkwOTQ3ODBa/detail">https://classroom.google.com/c/MjcwODc5MzI2NzJa/m/MzI3MzkwOTQ3ODBa/detail</a>



# Department Of Chemistry

**Student Centric Learning (Pedagogies Used)**

**Department of Chemistry**

- **Pedagogy used for Teaching –**  
Participatory Learning, Classroom Teaching, Interactive Sessions and Cutting-Edge Practice, Blended Learning, Flipped classroom.
- **Tools and Materials used-**
  - a. Blackboard or whiteboard
  - b. Projectors.
  - c. Computers for practical demonstrations
  - d. PPTs.
  - e. Teaching and learning resources- Reference Books /Text books, other references, digital learning resources including video, audio, animation and images, expert lectures
- **Description of the Methods -**
  - a. Teaching methods are the broader techniques used to help students achieve learning outcomes, while activities are the different ways of implementing these methods.
  - b. Practical Work: all teaching and learning activities in the sciences in which the student is actively involved and that allow the mobilization of science processes skills and scientific knowledge and that may be materialized by paper and pencil activities or observing and/or manipulating materials.
- **Outcomes (Learning Experience) -**
  - i. A strong sense of identity
  - ii. Connection to and contribution with their world.
  - iii. A strong sense of wellbeing.
  - iv. Confident and involved learners.
  - v. Soft skills.
  - vi. Learning Computers & Management allows students to learn about the Programming concepts and gain skills as logical & critical thinking, problem-solving, management skills.

## Experiential Learning

Academic Year 2018-19	Sr. No.	Method used	Content
	1.	Project Work	M.Sc. II
	2.	CAT exam	T.Y.B.Sc.

### Project List (2018-19) M.Sc.-II

Sr.No	Name of Student	Project Title	Name of Project Guide
1.	Bhamare Akash Daulat	(NH <sub>4</sub> ) <sub>2</sub> HPO <sub>4</sub> catalysed one pot synthesis of 4- arylideine-3- methyl-5(4-OH)- ones	Dr. J. P. Mahashashabde
2.	Chaudhari Neha Ambalal		
3.	Chavan Bhavesh Ravindra		
4.	Dhangar Sandip Dnyaneshwar		
5.	Girase Jaypasing Nimba	One pot synthesis of Dihydropyrimidines	Mr. J. P. Sonawane
6.	Gujar Vipul Dipak		
7.	Jadhav Mayur Rajendra		
8.	Jadhav Pratik Sudhakar		
9.	Jain Puja Pankajlal	Synthesis of New pyrazoles and their biological applications	Mrs. R. B. Chaudhari
10.	Kasar Rohan Rajendra		
11.	Koli Bhatu Khanderao		
12.	Mahajan Pavan Sudhakar		
13.	Mahajan Siddheshwar Sopandeo	One pot synthesis of Dihydropyrimidines	Mr. S. B. Chaudhari
14.	Padvi Roben Motiram		
15.	Patel Rinkal Sanjay		
16.	Patil Aishwarya Kishor		
17.	Patil Ajay Prakash	Synthesis of New Pyrazoles and their Biological Applications	Ms. K. P. Behare
18.	Patil Amol Gulabrao		
19.	Patil Ankita Keshav		
20.	Patil Dipika Bhaskar		
21.	Patil Mrunal Nimba		
22.	Patil Nikita Uddhav	Synthesis of Azo Dyes and their	Mr. S. S. Patil
23.	Patil Nilesh Dnyaneshwar		

24.	Patil Pravin Shatrughna	applications	
25.	Patil Vipul Ravindra		
26.	Patole Bhaiyya Dilip		
27.	Pawar Vaibhav Narendra	One Pot Synthesis of Duihydropyrimidine s	Mr. G. M. Vanjari
28.	Rajput Mahendrasing Umedsing		
29.	Sonawane Chetan Himmatrao		
30.	Suryawanshi Kiran Charan		
31.	Thorat Sapana Vasant		
32.	Wagh Chandrakant Dnyaneshwar		

*Ahushabde*

**Dr. J. P. Mahashbde**  
**HOD**  
**Dept. of Chemistry**



**Short Research Project Certificate**



# R.C.PATEL A.C.S. COLLEGE, SHIRPUR



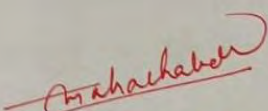
R C Patel Educational Trust

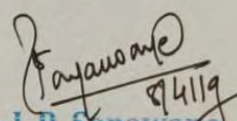
## DEPARTMENT OF CHEMISTRY

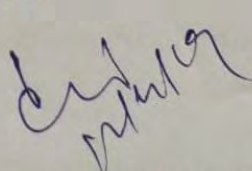
# CERTIFICATE

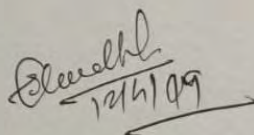
This is to certify that the project report on "*(NH<sub>4</sub>)<sub>2</sub>HPO<sub>4</sub> Catalyzed One Pot Synthesis of 4-arylidene-3-methylisoxazol-5(4H)-ones*" has been submitted by *Mr. Jaipalsing Nimba Girase*. In part fulfillment of degree of Master of Science in Organic Chemistry under our guidance and supervision in the department of Organic chemistry, under the aegis of North Maharashtra University, Jalgaon.

The material that has been obtained from other sources has been duly acknowledged in the report. The work has not been submitted elsewhere for a degree or other academic award.

  
Dr. J.P. Mahashabde  
Head

  
Mr. J. P. Sonawane  
Guide





1 | (NH<sub>4</sub>)<sub>2</sub>HPO<sub>4</sub> Catalyzed One Pot Synthesis of 4-arylidene-3-methylisoxazol-5(4H)-ones

## Chemistry Ability Test Exam



Academic Year 2019-20	Sr. No.	Method used	Content
	1.	Project Work	M.Sc.II online

### Project List (2019-20) M.Sc.-II

Sr. No.	Name of Students	Project Title	Name of Project Guide
1.	Barela Rupla Gumanya	Synthesis & Characterization of some deep eutectic Solvent	Dr. J. P. Mahashabde
2.	Dhangar priyanka Parshuram		
3.	Patil Dhiraj Ravindra		
4.	Patil Jyotsna Suresh		
5.	Bari Sonal Hari	Green Synthesis of benzimidazoles using dragon fruit peels water extract	Mr. J. P. Sonawane
6.	Deore Ashwini Bhanudas		
7.	Bhamare Nisha Bhagwan	Ionic Liquid Catalysed One Pot Synthesis of pyrazole	Mrs. R. B. Chaudhari
8.	Baviskar Neha Ashok		
9.	Jagtap Rushikesh Rajesh		
10.	Mali Vaishali Suresh		
11.	Patil Abhay Manohar		
12.	Baviskar Kalpesh Narayan	Design, Synthesis & Application of new Coumarin Compound	Ms. A. A. Pandit
13.	Girase Dipak		
14.	Patil Chetan Suresh		
15.	Borse Nikita Bhatu	Design & Synthesis of Propanolole Derivative	Ms. N. A. Borgaonkar
16.	Deore Komal Kishor		
17.	Kumbhar Rakesh Daga		
18.	More Punam Dipak		
19.	Patil Devyani Dhanraj		
20.	Girase Jayesh Udaysing	Synthesis characterization & fluorescence study of some phthalene dyes	Ms. S. R. Patil
21.	Patil Kavita Suresh		

*Ahahabade*

**Dr. J. P. Mahashbde**  
**HOD**  
**Dept. of Chemistry**





Academic Year 2021-22	Sr. No.	Method used	Content
	1.	Project Work	M.Sc.
	2.	Industrial Visits	M.Sc.II

### Project Work



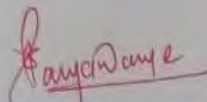


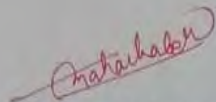
## Project Work

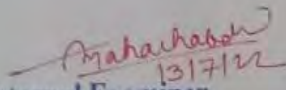
**CERTIFICATE**

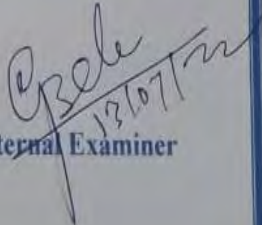
This is to certify that, the project report on "Catalyst Free Synthesis of Biologically Active Propranolol Scaffold" has been submitted by Mr. Gaurav Sunil Wagh in partial fulfillment of degree of Master of Science in organic chemistry under my guidance & supervision in department of organic chemistry college.


The material obtained from other sources has been duly acknowledged in this report. The work has not been submitted elsewhere for a degree or other academic award.

  
Prof. J. P. Sonawane  
Project Guide

  
Prof. J. P. Mahashabde  
(HOD, Chemistry)  
HEAD  
Department of Chemistry  
R.G. Patil Arts, Science & Sol. Coll.  
Warananagar, Shivajinagar 425 004

  
Internal Examiner  
13/7/22

  
External Examiner  
13/07/22



2

**Project List (2021-22) M.Sc.-II**

Sr. No.	Student Name	Title of Project	Name of Project Guide
1.	Bava Yogita Dnyaneshwar	Synthesis & Characterization of some deep eutectic Solvent	Dr. J. P. Mahashabde
2.	Bhadane Puja Vikas		
3.	Bhamare Rushikesh Yogesh		
4.	Chaudhari Kunal Mohan		
5.	Chavan Dhiraj Vedu		
6.	Desale Yogesh Sanjay	Design & Synthesis of Propanolole Derivative	Mr. J. P. Sonawane
7.	Girase Himani Chhotusing		
8.	Karankal Gayatri Dinesh		
9.	Koli Premkumar Supadu		
10.	Mahajan Rahul Rohidas		
11.	Mahajan Shruti Sopandev	Design, Synthesis & Application of new Coumarin Compound	Mrs. R. B. Chaudhari
12.	Mali Bhavesh Dilip		
13.	Mali Kunal Dilip		
14.	Mishra Neha Narendra		
15.	Patel Riyaj Faruk		
16.	Patil Yogita Rajendra		
17.	Patil Ananda Ramesh	Green Synthesis of benzimidazoles using Banana peels water extract	Ms. N. A. Borgaonkar
18.	Patil Anjali Premchand		
19.	Patil Dhanashri Rajendra		
20.	Patil Himanshu Prashant		
21.	Patil Jagruti Nandkishor		
22.	Patil Jidnyasa Anil	One pot synthesis of Dihydro pyrimidines	Mr. K. A. Pawara
23.	Patil Mrunali Jitendra		
24.	Patil Nayan Sunil		
25.	Patil Nayana Sambhaji		
26.	Patil Prafulla Vasant		
27.	Patil Pritesh Sunil	Ionic Liquid promoted efficient synthesis of Tris-coumarin	Mr. V. S. Patil
28.	Patil Rushikesh Rajendra		
29.	Patil Saurabh Ravindra		
30.	Patil Suvarna Manohar		

31.	Patil Tejswini Vijay		
32.	Patil Vaishali Balu	Design synthesis of characterization of triazolidines	Mr. J. P. Sonawane
33.	Patil Vivek Navnath		
34.	Pawar Vaishnavi Dagadu		
35.	Sandanshiv Prafulla Prakash		
36.	Shirsath Bhushan Shirish		
37.	Shirsath Nishant Dilip	Green Synthesis of benzimidazoles using dragon fruit peels water extract	Dr. J. P. Mahashabde
38.	Shirsath Shilpa Hilal		
39.	Shivade Kalpesh Sunil		
40.	Sonawane Nilesh Prabhakar		
41.	Vankhede Rahul Dilip	Synthesis characterization & fluorescence study of some phthalene dyes	Mr. J. P. Sonawane
42.	Vasave Anudeep Kain		
43.	Vispute Pooja Jitendra		
44.	Wagh Gaurav Sunil		

*Ahahashabde*

**Dr. J. P. Mahashbde**

**HOD**

**Dept. of Chemistry**



**Industrial Visit at Textile Park, Shirpur**





Academic Year 2022-23	Sr. No.	Method used	Content
	1.	Project Work	M.Sc. II

### Project List (2022-23) M.Sc.-II

Sr.No.	Name of Students	Project Title	Name of Project Guide
1.	Seema Arun Borse	Ionic Liquid promoted efficient synthesis of bis-coumarin	Dr. J. P. Mahashabde
2.	Jitendra Ramesh Chavan		
3.	Rohini Mulchand Mahajan		
4.	Srushti.K. Patil		
5.	Harshada Madhukar Patil		
6.	Yogesh Harsing Rajput		
7.	Suyog S. Bhavsar	Green Synthesis of benzimidazoles using dragon fruit peels water extract	Mr. J. P. Sonawane
8.	Prasad C Chaudhari		
9.	Chandresh D. Kalal		
10.	Ananda Y. Shelar		
11.	Samadhan B. Sirsath		
12.	Chandresh D. Kalal	Synthesis of novel DES & Their applications as catalyst and reaction media for organic synthesis	Mrs. R. B. Chaudhari
13.	Lina. R. Bagle		
14.	Jayesh S. Gaval		
15.	Neha P. Girase		
16.	Swapnil D. Warude		
17.	Rohini C. Rajput		
18.	Harshal R Patil	Low temperature transition mixture promoted one pot three component synthesis of beta enamino derivatives	Ms. N.A. Borgaonkar
19.	Neha Subhash Patel		
20.	Manish Jagdish Patel		
21.	Siddhi Rajesh Patel		
22.	Sagar Kantilal Patil	Design & Synthesis of thymol Appended heterocyclic compound	Mr. K. A. Pawara
23.	Hemangi Mohan Mahale		
24.	Patil Jitendra Manohar		
25.	Patil Kunal Bharat		

26.	Sirsath Pallavi Ashok		
27.	Sonawane Vishakha Rajendra		
28.	Mansi H Girase	Design synthesis of characterization of triazalidines	Mr. V.S. Patil
29.	Kshitija H Thorat		
30.	Trupti S Sonawane		
31.	Dinesh S Patil		
32.	Abhay M Patil		
33.	Nikam Yogeshwar Sarjerao	Synthesis characterization & fluorescence study of some phthalene dyes	Mr. J. P. Sonawane
34.	Bhamre Vishal Sanjay		
35.	Gavit Rutik Dasu		
36.	Bhavar Durgesh Dashrath		
37.	Kuwar Kunal Maharaj		
38.	Wadile Sumit Mohan		

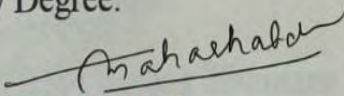
*Anahashbde*

**Dr. J. P. Mahashbde**  
**HOD**  
**Dept. of Chemistry**  
**Project Work**

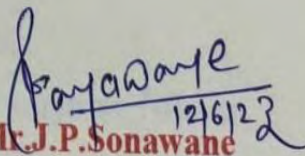


# CERTIFICATE

This is to certify that the thesis entitled “**SYNTHESIS, CHARACTERIZATION AND FLUOROSCEENCE STUDY OF SOME PHTHALEIN DYES**” submitted by **MR.RUTIK DASU GAVIT, MR.DURGESH DASHARATH BHAVAR, MR.YOGESHWAR SARJERAO NIKAM & MR.VISHAL SANJAY BHAMARE** for the award of the Degree of **Master of Science in Chemistry (Specialization in Organic Chemistry)** is a record of bonafide research work done under my guidance and supervision during the period of M.Sc-II in the Department of Organic chemistry under the aegis of **KAVAYITRI BAHINABAI CHAUDHARI NORTH MAHARASHTRA UNIVERSITY, JALGAON** and that it has not previously formed the basis for the award of any Degree.

  
**Dr.J.P.Mahashabde**

**Head**  
**Department of chemistry**

  
**Mr.J.P.Sonawane**

**Project Guide**



## Practical Demonstration at Chemistry Lab





## Practical Demonstration at Chemistry Lab



## Practical Demonstration at Chemistry Lab





**Industrial Visit Sula vineyards, Nashik**



**Production Department at Sula Wine Yards**



## Participative Learning

Academic Year 2018-19	Sr. No.	Method used	Content
	1.	Poster Presentations	Poster Presentation on Science Day

### Poster Presentation on Science Day





Academic Year	Sr. No.	Method used	Content
2019-20	1.	Poster Presentations	Poster Presentation on Science Day
	2.	Flipped Classroom	T.Y.B.Sc

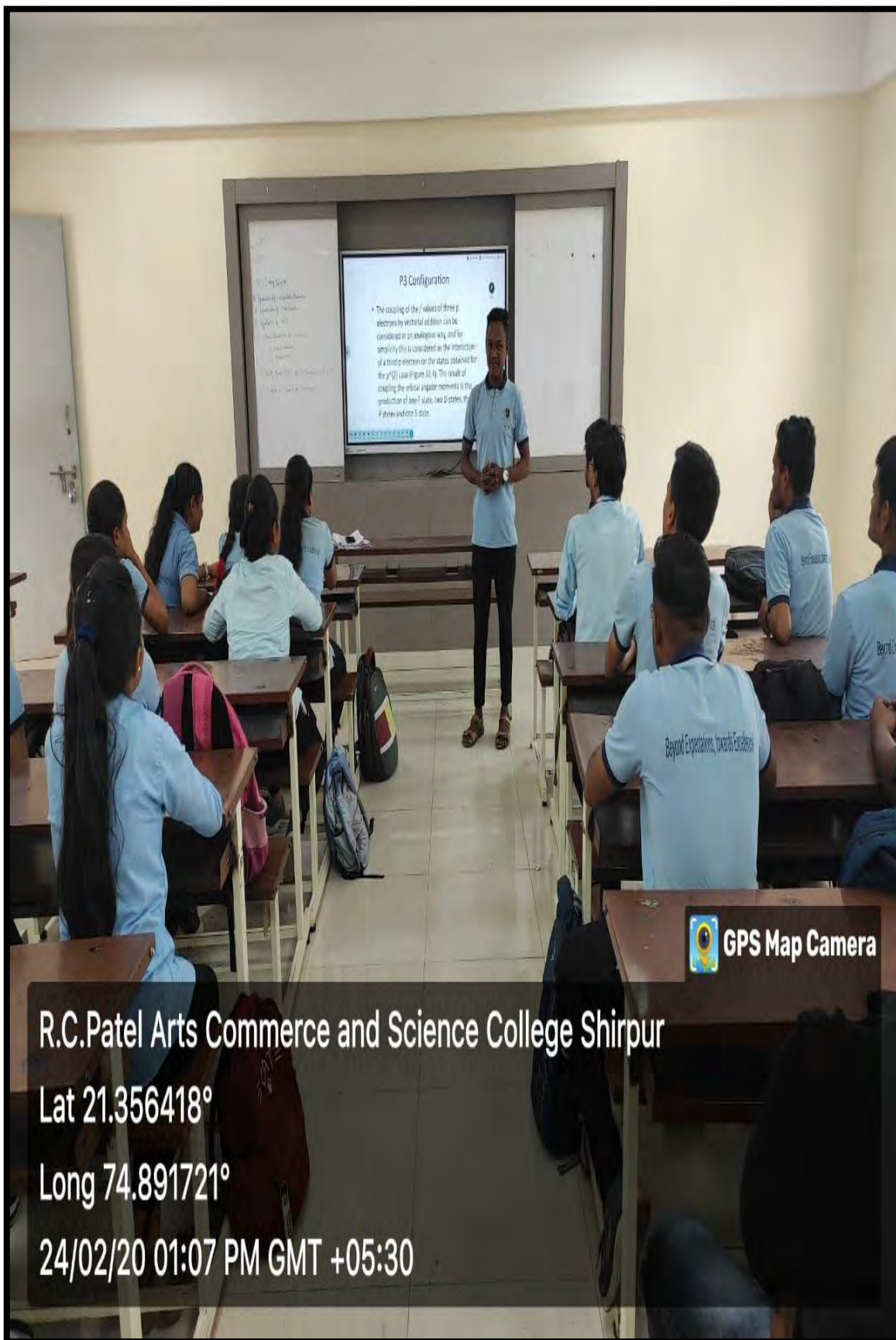
### Poster Presentation on Science Day







## Flipped Classroom M.Sc.-II



Academic Year 2020-21	Sr. No.	Method used	Content
	1.	Poster Presentations	Poster Presentation on Science Day

### Poster Presentation



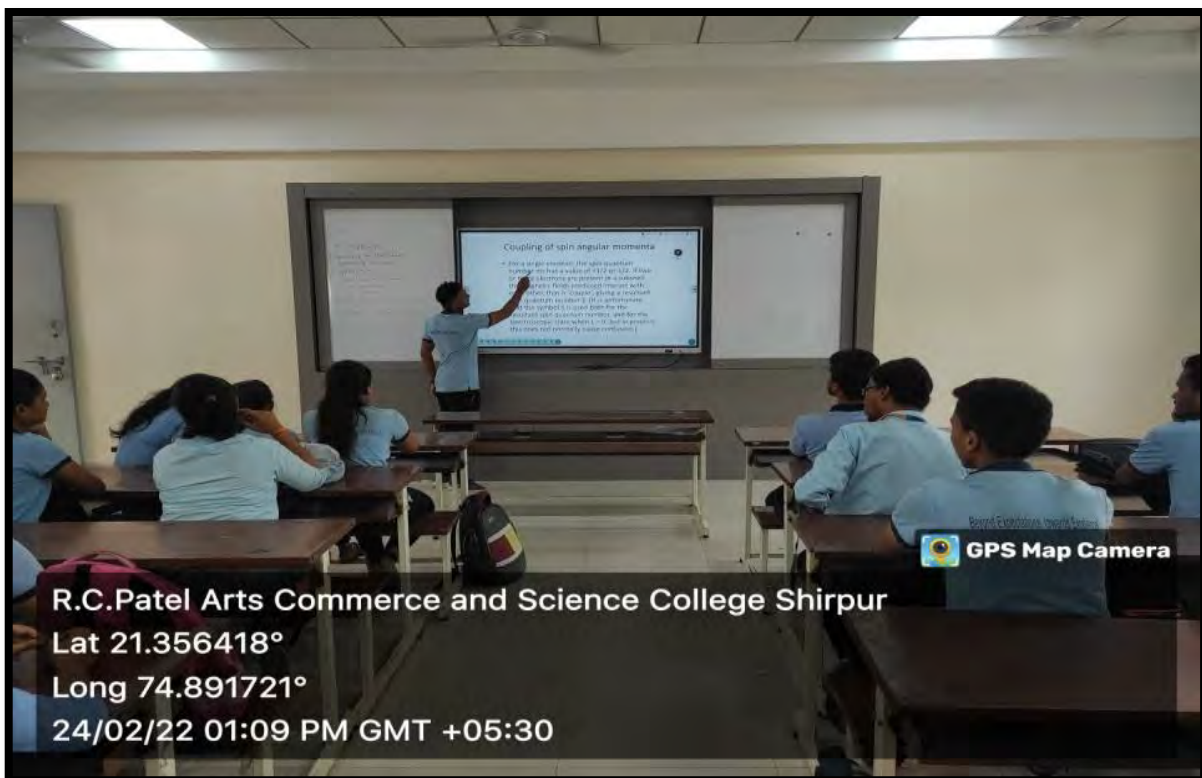


Academic Year 2021-22	Sr. No.	Method used	Content
	1.	Poster Presentations	Poster Presentation on Science Day
	2.	Flipped Classroom	T.Y.B.Sc.

### Poster Presentation



### Flipped classroom



	Sr. No.	Method used	Content
Academic Year 2022- 23	1.	Group Discussion	M.Sc.II
	2.	Flipped Classroom	M.Sc.I
	3.	Poster Presentations	Poster Presentation on Science Day

### Group Discussion



### Flipped Classroom





**Poster Presentation**



## Problem Solving

Academic Year 2018-19	Sr. No.	Method used	Content
	1.	CAT Exam	T.Y.B.Sc.

### Chemistry Ability Test Exam





Academic Year 2019-20	Sr. No.	Method used	Content
	1.	Expert Talk	Total Organic Synthesis
	2.	Guidance Session	Research Projects

### Guest Lecture on Total Organic Synthesis



R.C Patel A.C.S. College, Shirpur

Department Of Chemistry

Guest Lecture on "Total Organic Synthesis"

By Alumni Dr. Yuvraj Satkar

03/03/2020

Sr. No.	Roll No.	Student Name	Class	Sign.
1	55	Mali Vaishali Suresh	Msc-II	<u>Mali</u>
2	60	Patil Devyani Ghamraj	Msc-II	<u>Patil</u>
3	65	Bari Sonal Hari	Msc-II	<u>Bari</u>
4	67	Bhamre Nisha Bhagwan	Msc-II	<u>Bhamre</u>
5	120	Patil Prashant Premraj	Msc-II	<u>Patil</u>
6	115	Deore Komal Kishor	Msc-II	<u>Deore</u>
7	118	Deore Ashwini Bhanudas	Msc-II	<u>Deore</u>
8	215	Baviskar Neha Ashok	Msc-II	<u>Baviskar</u>
9	18	Borse Nikita Bhatu	Msc-II	<u>Borse</u>
10	20	Patil Kunal Shankaram	Msc-II	<u>Patil</u>
11	45	Patil Komal Ishwan	Msc-II	<u>Patil</u>
12	111	Pode Jyoti Vijayrao	Msc-II	<u>Pode</u>
13	220	Thite Vishal Appasaheb	Msc-II	<u>Thite</u>
14)	121	Baviskar Karpesh Nalayan	Msc-II	<u>Baviskar</u>
15)	210	Patil Chetan Subhash	Msc-II	<u>Chetan</u>
16)	278	Kumawat Manojkumar Mukesh	T.Y.B.Sc	<u>Manojkumar</u>
18)	337	Dorik Nilesh Motilal	T.Y.B.Sc	<u>Dorik</u>
19)	315	Mahajan Prem Sunil	T.Y.B.Sc	<u>Mahajan</u>
20)	332	Rajput ponkaj sonjarsing	T.Y.B.Sc	<u>Rajput</u>
21)	188	Patil Dhanashri Rajendra	T.Y.B.Sc	<u>Patil</u>
22)	232	Wadile Namrata Kailas	T.Y.B.Sc	<u>Wadile</u>
23)	80	Patil Bhavana Himmatrao	T.Y.B.Sc	<u>Patil</u>
24)	288	Patil Suvasna Vijay	T.Y.B.Sc	<u>S.V. Patil</u>
25)	32	Chavan Dhiraj Vedy	T.Y.B.Sc	<u>Chavan</u>



25	283	Chauhan Harshat Ashok	Ty. BSc	(Harpal)
26	86	Baviskar Harshal S.	T.Y.	TK
27	153	Khandare Rushikesh	T.Y.	RK
28	154	Mali Kailas Baban.	T.Y. BSc.	Isalmali
29	40	Pajpuh Ruchin Nagin	T.Y. BSc	Pajpuh
30	87	Ahizee Saugat Devidar	T.Y. BSc	Rajpatel
30	234	Patel Riyaj Faruk	T.Y. BSc	(Bhuli)
31	189	Koli Bharat Ganesh	T.Y. BSc	(Bhuli)
32	81	Girase Nilesh Mahendra	T.T. BSc	(Bhuli)
33	02	Rajput Mahendra Umesh	M.Sc-I	Murkapat
34	15	Patel Shaiyq Dilip	M.Sc-I	Fat
35	14	Koli Bhatu Khanderao	M.Sc-I	Bekeli
36	19	Sonawane Chetan Himmat	M.Sc-I	(Bhuli)
37	18	Patil Amol Gulabrao	M.Sc I	(Patil)
38	21	Bhamare Aakash Dawlat	m.sc I	(Bhuli)
39	09	Mahajan Pavan Sadhakar	M.Sc-I	Brahyan
40	27	Jadhav Mayur Rajendra	M.Sc-I	Bhadhav
41	29	Wagh Chandrakant Dnyaneshwar	m.sc-I	Wagh
42	13	Dhangar Sandip Dnyaneshwar	m.sc-I	Dhangar
43	04	PATIL PRAVIN SHATRUGHNA	M.Sc-I	(Patil)

Anaharabhat

**ABAD**  
 Department Of Chemistry  
 C. Patel Arts, Comm. & Sci. College  
 Shirpur, Dist. Dhule 425 405

**Guidance on Short Research Project for PG Students (08/08/2020)**





**R.C.Patel Arts, Commerce and Science College, Shirpur**

**Department of chemistry**

**Activity Report to IQAC**

Date: 08 August 2020

**Name of event: One Day Workshop on Short Research Project Preparation**

**Objectives:** To provide a broad foundation in chemistry that succeeds in Industries or professional level. To expose the students to a breadth of experimental techniques using modern instrumentation. To learn professionalism, including the ability to work in teams and apply basic ethical principles.

**Programme of Outcomes:**

1. Students should learn laboratory skills needed to design, safely conduct and interpret chemical research.
2. Student will understand scientific reasoning and analytical problem solving in chemistry
3. Students will be able to clearly communicate the results of scientific work in oral, written and electronic formats
4. Students will develop the ability to effectively communicate scientific information and research results.
5. Students will be able to explore new areas of research in both chemistry and allied fields of science and technology

**Date and Time:** 8/8/2020 (1 to 4 pm)

**Duration:** 3 hour

**Name of resource person:**

Dr. J. P. Mahashabde: Research methodology

Mr. J. P. Sonawane: Referencing and writing short research project.

**Expected beneficiaries:** P.G. -33

**Beneficiaries actually attended:** P.G. -33

### Briefing of programme:

Department of chemistry organized a one day workshop to guide a P.G. students on short Research project. It is based on basic and conceptual knowledge of chemistry. All teachers participated for this workshop which is for P.G. students. Teachers guide them for referencing, methodology, techniques and prepare them for research awareness through such practices.

### Name of the participant:

Sr.No.	Name Of the Students
1	Bhamare Aakash daulat
2	Chaudhari Neha Ambalal
3	Chavhan Bhavesh Ravindra
4	Dhangar Sandip Dnyaneshwar
5	Girase swati Narendrasing
6	Gujar Vipul Dipak
7	Jadhav Mayur Rajendra
8	Jadhav Pratik Sudhakar
9	Jain Puja Pankajlal
10	Kasar Rohan Rajendra
11	Koli Bhatu Khanderao
12	Mahajan Pavan Sudhakar
13	Mahajan Siddheshwar Sopandeo
14	Padvi Roben Motiram
15	Patel Rinkal Sanjay
16	Patil Aishvarya Kishor
17	Patil Ajay Prakash
18	Patil Amol Gulabrao
19	Patil Ankita Keshav
20	Patil Dipika Bhaskar
21	Patil Mrunal Nimba
22	Patil Nikita Uddhav
23	Patil Nilesh Dnyaneshwar
24	Patil Pravin Shatrughna
25	Patil Vipul Ravindra
26	Patole Bhaiyya Dilip
27	Pawar Vaibhav Narendra
28	Rajput Mahendrasing Umedsing
29	Sonawane Chetan Himmatrao
30	Suryawanshi Kiran Charan
31	Thorat Sapana Vasant
32	Wagh Chandrakant Dnyaneshwar

*Anchaleshwar*  
**ABAL**  
Department Of Chemist  
C.C. Patel Arts, Comm. & Sci. Coll.  
Shirour, Dist. Dhule 425 405



R.C Patel A.C.S. College, Shirpur

Seminar

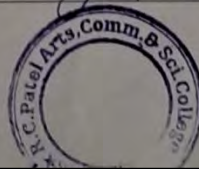
Department Of Chemistry

① Graphene : Wonder Material for Biosensing & Environmental Remediation Applications.

② Micelles as a Nanosized carrier for Cancer Treatment.

14/03/2020

Sr. No.	Roll No.	Student Name	Class	Sign.
1)	82	Girase sachin sudamsing	T.Y. (chem)	Girase
2)	15	patole bhairya Dilip	Msc-I	Patole
3)	02	Rajput Mahendra Umadsing.	Msc-I	Rajput
4)	14	Koli Bhatu Khanderao	MSc-I	Koli
5)	278	Kumawat Manoj Kumay Mukesh K.	T.Y. B.Sc (Chem)	Manoj Kumawat
6)	250	Patil Braatik Anil	F.Y. BSc	Patil
7)	332	Rajput ponkaj Sonjaysing	T.Y. BSc (chem)	Rajput
8)	50	Rajput sumit Narayansing	T.Y BSc (chem)	Rajput
9)	281	Desale vishal Kanhyal	T.Y. BSc (chem)	Desale
10)	27	sodhav Mayur Rajendra	Msc-I	Sodhav
11)	13	Dhangar sandip Dnyanesh	Msc-I	Dhangar
12)	19	Sonawane chetan Himmatrao	11	Sonawane
13)	18	Barela Rupal Ganayrao	Msc. II (chem)	Barela
14)	29	Patil Chetan Subhash	M.Sc. II (chem)	Patil
15)	17	Patil Prashant Praemraj	Msc II (chem)	Patil
16)	10	Patil Kunal Shantaram	Msc-II (chem)	Patil
18)	29	wagh Chandrakant Dnyaneshwar	Msc-I (chem)	Wagh
19)	31	Jadhav Pratik Sudhakar	M.Sc. II (chem)	Jadhav
20)	41	Yangar Lalaso Popal	Msc-II (chem)	Yangar
21)	32	Wite Vishal Appasaheb	Msc-II (chem)	Wite
22)	20	mohatan Siddheshwar Somanth	MSc-I (chem)	Mohatan
23)	66	Shirsabh Hemant Subhadh	MSc II (chem)	Shirsabh
24)	3	Girase Tejesh V.	MSc II (chem)	Girase
25)	99	Dawar Faruq N.	MSc. II (chem)	Dawar
26)	10	Bawiskar Kalpesh Narayan	MSc II (chem)	Bawiskar



Department of Chemistry  
R.C. Patel Arts, Comm. & Sci. College,  
Shirpur, Dist. Dhule 425 406





**R.C Patel A.C.S. College, Shirpur**

**Department Of Chemistry**

**Guest Lecture on ..Graphene : Wonder material**

14/03/2020

Sr. No.	Roll No.	Student Name	Class	Sign.
1.	147	Patil Jidnyasa Anil	Ty.BSc(Chem)	Patil
2.	148	Mahajan Shruti Sapandev	Ty.BSc(Chem)	mahajan
3	215	Rajput Bhagyashree Ranjising	T.Y.BSc(Chem)	Rajput
4	230	Mahajan Puja Subhash	T.Y.BSc(Chem)	MA
5	287	Patil Jayshree Kaibed	T.Y.BSc(Chem)	Patil
6	341	patil pratibha Shrikant	T.Y.BSc(Chem)	Patil
7	252	Jadhav Rupali Rajendra	T.Y.BSc(Chem)	Raj
8	194	Mali Harshada madhavrao	T.Y.BSc(Chem)	Harshi
9	192	Patil Jayashri Pitambar	Ty.BSc(Chem)	Jayashri
10	288	Patil Suvaina vijay	T.Y.BSc(Chem)	S.V.Patil
11	04	Power Nomrate Sanjay	M.Sc.I(CPHI)	Power
12	195	mahanubhav swati Rajendra	TYBSC(Chemistry)	Mahanubhav
13	292	Patil harshada Ashok	TYBSC(Chem)	Harshada
14	37	patil Jyotsna suresh	MSc-II(Chem)	Jyotsna
15	36	Dhangar Priyanka P.	MSc II(Chem)	Dhangar
16	08	Deore Ashwini Bhanudas	MSc-II(Chem)	Deore
17	26	patil Meghna yuni makesh	MSc-II(Chem)	Patil
18	34	Patil Lalita namdeo	MSc-II(Chem)	Patil
19	17	Patil Devyani Dhaemraj	MSc-II(Chem)	Patil
20	72	Patil Dhiraj Ravindra	MSc-II(Chem)	Patil
21	79	Rajput Vipul Bhavansing	MSc-II(Chem)	Rajput
22	16	Kumbhar Rakesh Daga	MSc-II(Chem)	Kumbhar
23	11	Patil Amol Gulabrao	MSc I(Chem)	Patil
24	06	Gujar vipul vipak	MSc I(Chem)	Gujar
25	07	Patil Vipul Ravindra	MSc I(Chem)	Patil



**HEAD**  
 Department Of Chemistry  
 R.C. Patel Arts, Comm. & Sci. College  
 Shirpur, Dist. Dhule 425 405



Academic Year 2020-21	Sr. No.	Method used	Content
	1.	Expert Talk	Short Research Project

**R.C.Patel Arts, Commerce and Science College, Shirpur**  
**Department of chemistry**  
**Activity Report to IQAC**

Date: 08 August 2020

**Name of event: One Day Workshop on Short Research Project Preparation**

**Objectives:** To provide a broad foundation in chemistry that succeeds in Industries or professional level. To expose the students to a breadth of experimental techniques using modern instrumentation. To learn professionalism, including the ability to work in teams and apply basic ethical principles.

**Programme of Outcomes:**

1. Students should learn laboratory skills needed to design, safely conduct and interpret chemical research.
2. Student will understand scientific reasoning and analytical problem solving in chemistry
3. Students will be able to clearly communicate the results of scientific work in oral, written and electronic formats
4. Students will develop the ability to effectively communicate scientific information and research results.
5. Students will be able to explore new areas of research in both chemistry and allied fields of science and technology

**Date and Time:** 8/8/2020 (1 to 4 pm)

Duration: 3 hour

**Name of resource person:**

Dr. J. P. Mahashabde: Research methodology

Mr. J. P. Sonawane: Referencing and writing short research project.

**Expected beneficiaries:** P.G. -33

**Beneficiaries actually attended:** P.G. -33



**Briefing of programme:**

Department of chemistry organized a one day workshop to guide a P.G. students on short Research project. It is based on basic and conceptual knowledge of chemistry. All teachers participated for this workshop which is for P.G. students. Teachers guide them for referencing, methodology, techniques and prepare them for research awareness through such practices.

**Name of the participant:**

Sr.No.	Name Of the Students
1	Bhamare Aakash daulat
2	Chaudhari Neha Ambalal
3	Chavhan Bhavesh Ravindra
4	Dhangar Sandip Dnyaneshwar
5	Girase swati Narendrasing
6	Gujar Vipul Dipak
7	Jadhav Mayur Rajendra
8	Jadhav Pratik Sudhakar
9	Jain Puja Pankajlal
10	Kasar Rohan Rajendra
11	Koli Bhatu Khanderao
12	Mahajan Pavan Sudhakar
13	Mahajan Siddheshwar Sopandeo
14	Padvi Roben Motiram
15	Patel Rinkal Sanjay
16	Patil Aishvarya Kishor
17	Patil Ajay Prakash
18	Patil Amol Gulabrao
19	Patil Ankita Keshav
20	Patil Dipika Bhaskar
21	Patil Mrunal Nimba
22	Patil Nikita Uddhav
23	Patil Nilesh Dnyaneshwar
24	Patil Pravin Shatrughna
25	Patil Vipul Ravindra
26	Patole Bhaiyya Dilip
27	Pawar Vaibhav Narendra
28	Rajput Mahendrasing Umedsing
29	Sonawane Chetan Himmatrao
30	Suryawanshi Kiran Charan
31	Thorat Sapana Vasant
32	Wagh Chandrakant Dnyaneshwar

*Anahashaberi*

**R.C.Patel Arts, Commerce and Science College, Shirpur**

**Department of chemistry**

**Activity Report to IQAC**

Date: 07 July 2020

**Name of event: One Day Online Workshop on Safety Laboratory Practices**

**Objectives:** To provide broad information on Safety laboratory practices to work in a careful, organized manner. Horseplay, practical jokes or disruptive behaviour will not be tolerated and disciplinary action will be taken. Wear safety goggles during an experiment. To learn professionalism, including the ability to work in teams and apply basic ethical principles.

**Programme of Outcomes:** 1. Students should learn laboratory skills.

2. Student will avoid putting any chemicals.

3. Students will keep work area free of any materials not needed.

4. Students will stay with lab group and will not wander.

5. Students will know the location of first aid kit, eye wash station and fire extinguisher.

**Date and Time:** 07/07/2020 (2 to 4 pm)

Duration: 2 hour

**Name of resource person:**

Dr. J. P. Mahashabde: Laboratory safety (Principles and Practices)

Mr. J. P. Sonawane: Shielding for Safety.

**Expected beneficiaries:** P.G. -60 U.G. - 120

**Beneficiaries actually attended:** P.G. -60 U.G. - 120



**Briefing of programme:**

Department of chemistry organized a one day workshop to guide a P.G. and U.G students on Safety Laboratory Practices. It is based on basic knowledge doing many lab activities. All teachers participated for this workshop which is for P.G. and U.G. students. Teachers guided and prepared them for lab activity awareness through such practices.

**Name of the participant:**

Sr. No.	Name of student	Class
1.	THAKARE BHUSHAN DNYANESHWAR	T.Y.BSc.
2.	AHIRE PAWAN BHIDAS	T.Y.BSc.
3.	BARI ROSHAN SATISH	T.Y.BSc.
4.	BAVISKAR AKSHAY RAKESH	T.Y.BSc.
5.	BAVISKAR RAHUL HIRALAL	T.Y.BSc.
6.	BHAIRAV TEJASKUMAR CHATUR	T.Y.BSc.
7.	BHAMARE DHANRAJ SANJAY	T.Y.BSc.
8.	BHAMARE NILESH PRAKASH	T.Y.BSc.
9.	BHAPKAR NIRAJ SHANTILAL	T.Y.BSc.
10.	BHAVSAR SUYOG SANJAY	T.Y.BSc.
11.	BHOI KIRAN SANTOSH	T.Y.BSc.
12.	BORSE DIPALI CHINTAMAN	T.Y.BSc.
13.	BORSE HRUTIK KALYAN	T.Y.BSc.
14.	BORSE JAYVARDHAN ASHISH	T.Y.BSc.
15.	BORSE SEEMA ARUN	T.Y.BSc.
16.	CHAUDHARI ADITYA ARUN	T.Y.BSc.
17.	CHAUDHARI CHAITALI CHOTTU	T.Y.BSc.
18.	CHAUDHARI CHETAN SUNIL	T.Y.BSc.
19.	CHAUDHARI ROHIT PRAMOD	T.Y.BSc.
20.	CHAUDHARI SHWETAL SUDHAKAR	T.Y.BSc.
21.	CHAVAN JITENDRA RAMESH	T.Y.BSc.
22.	CHAVAN KUNAL PRAKASH	T.Y.BSc.
23.	DALAL HARSHAL RAMESHWAR	T.Y.BSc.
24.	DEORE PANKAJ MANIK	T.Y.BSc.
25.	DESHMUKH SWARUPA DHANSING	T.Y.BSc.
26.	DHANGAR SHUBHAM HILAL	T.Y.BSc.
27.	GIRASE MANASI HEMENDRASING	T.Y.BSc.
28.	GIRASE BALWANT BAPUSING	T.Y.BSc.
29.	GIRASE BHARAT DEEPAK	T.Y.BSc.
30.	GIRASE DEVEN PRAVIN	T.Y.BSc.
31.	GIRASE HARSHAL BHATUSING	T.Y.BSc.
32.	GIRASE NEHA GAJENDRA	T.Y.BSc.
33.	GIRASE PANKAJ NAVALSING	T.Y.BSc.
34.	GIRNAR MAHESH PRAKASH	T.Y.BSc.
35.	JADHAV BHAGYASHRI MEHARBAN	T.Y.BSc.
36.	JANGID NIKITA SAGARMAL	T.Y.BSc.
37.	JAVHERI HARSHAJIT DILIPSING	T.Y.BSc.
38.	KALAL CHANDRESH DEVKRISHNA	T.Y.BSc.



39.	KARANKAL KALPESH PRAVIN	T.Y.BSc.
40.	KHATIK REHANSHEKH MEHMUD	T.Y.BSc.
41.	KHATIK SHAHDAB SHEKH MUSALIM	T.Y.BSc.
42.	KHONDE YOGITA RAVINDRA	T.Y.BSc.
43.	KOLAPKAR SWATI RAJENDRA	T.Y.BSc.
44.	KOTHAWADE KALYANI DILIP	T.Y.BSc.
45.	KULKARNI BHUSHAN CHANDRAKANT	T.Y.BSc.
46.	MAHAJAN ROHIT SURYAKANT	T.Y.BSc.
47.	MAHAJAN SRUSHTI ASHOK	T.Y.BSc.
48.	MAHAJAN JAGRUTI SUNIL	T.Y.BSc.
49.	MAHAJAN MEENAKSHI GULAB	T.Y.BSc.
50.	MAHAJAN ROHINI MULCHAND	T.Y.BSc.
51.	MAHAJAN TEJSWINI MAHENDRA	T.Y.BSc.
52.	MARATHE KOMAL RAVINDRA	T.Y.BSc.
53.	MARATHE PUNAM JAGADISH	T.Y.BSc.
54.	MARATHE SUSHANT SANTOSH	T.Y.BSc.
55.	PATEL SAGAR SUNIL	T.Y.BSc.
56.	PATEL HARSHAL RAMAN	T.Y.BSc.
57.	PATEL MANISH JAGDISH	T.Y.BSc.
58.	PATEL NEHA SUBHASH	T.Y.BSc.
59.	PATEL NIKHIL BHAGWAN	T.Y.BSc.
60.	PATEL SIDDHI RAJESH	T.Y.BSc.
61.	PATIL ASHWINI KAILAS	T.Y.BSc.
62.	PATIL BHUSHAN SATISH	T.Y.BSc.
63.	PATIL MAHESH DNYANESHWAR	T.Y.BSc.
64.	PATIL PARESH RAJENDRA	T.Y.BSc.
65.	PATIL PRIYANKA NITIN	T.Y.BSc.
66.	PATIL ROSHANA BHASKAR	T.Y.BSc.
67.	PATIL SAGAR KANTILAL	T.Y.BSc.
68.	PATIL SHANTANU ASHOK	T.Y.BSc.
69.	PATIL TEJASWINI KISHOR	T.Y.BSc.
70.	PATIL AKSHADA PRABHAKAR	T.Y.BSc.
71.	PATIL AKSHAY DNYANESHWAR	T.Y.BSc.
72.	PATIL AKSHAYKUMAR MAHENDRASING	T.Y.BSc.
73.	PATIL AMOL SAMBHAJI	T.Y.BSc.
74.	PATIL ANAND KAUTIK	T.Y.BSc.
75.	PATIL GAURAV DILIP	T.Y.BSc.
76.	PATIL HARSHADA MADHUKAR	T.Y.BSc.
77.	PATIL HARSHAL SANJAY	T.Y.BSc.
78.	PATIL HARSHALI SURESH	T.Y.BSc.
79.	PATIL JAYESH SOPAN	T.Y.BSc.
80.	PATIL JITENDRA PRALHADRAO	T.Y.BSc.
81.	PATIL KIRAN SAHEBRAO	T.Y.BSc.
82.	PATIL MADHURI VITTHAL	T.Y.BSc.
83.	PATIL NARESH SURESH	T.Y.BSc.
84.	PATIL NAYAN UDAY	T.Y.BSc.
85.	PATIL NILESH DNYANESHWAR	T.Y.BSc.
86.	PATIL PIYUSH SANJAY	T.Y.BSc.
87.	PATIL PRADNYA DEVIDAS	T.Y.BSc.
88.	PATIL PRASHANT KRISHNA	T.Y.BSc.
89.	PATIL PREM SAHRAD	T.Y.BSc.
90.	PATIL RAKESH BHAGWAN	T.Y.BSc.
91.	PATIL ROSHAN MADHUKAR	T.Y.BSc.

92.	PATIL SAGAR PRABHAKAR	T.Y.BSc.
93.	PATIL SHRADDHA JAGDISH	T.Y.BSc.
94.	PATIL SRUSHTI KIRAN	T.Y.BSc.
95.	PATIL VAIBHAV RAVINDRA	T.Y.BSc.
96.	PAWAR APEKSHA MADHAVRAO	T.Y.BSc.
97.	PAWAR DHANASHRI SHARAD	T.Y.BSc.
98.	PAWAR MANJUSHA DINESH	T.Y.BSc.
99.	PAWAR NARESH SANJAY	T.Y.BSc.
100.	PAWAR VISHAL JAMSING	T.Y.BSc.
101.	PRAJAPAT KAMALESH BHAIIDAS	T.Y.BSc.
102.	RAJPUT AMBARNATH PREMSING	T.Y.BSc.
103.	RAJPUT ATISH KAILAS	T.Y.BSc.
104.	RAJPUT DIVYA RAJENDRA	T.Y.BSc.
105.	RAJPUT RAJASHRI YOGENDRASING	T.Y.BSc.
106.	RAJPUT SWAPNIL RAJENDRA	T.Y.BSc.
107.	RAJPUT SWAPNIL RAMKRISHNA	T.Y.BSc.
108.	RAJPUT VIJAYSING RAMSING	T.Y.BSc.
109.	RAJPUT YASHODEEP DARBARSING	T.Y.BSc.
110.	RAJPUT YOGESH HARSING	T.Y.BSc.
111.	RAUL VARSHA YOGENDRASING	T.Y.BSc.
112.	ROKADE SAGAR RAJUBHAI	T.Y.BSc.
113.	SAINDANE PRIYANKA HIRALAL	T.Y.BSc.
114.	SALUNKHE VISHAKHA JITENDRA	T.Y.BSc.
115.	SHIMPI NIKHIL DNYANESHWAR	T.Y.BSc.
116.	SHINDE VIJAYA KAMALESHBAI	T.Y.BSc.
117.	SHIRSATH DHANASHRI SAHEBRAO	T.Y.BSc.
118.	SHRAVAGE AKSHADA ARUN	T.Y.BSc.
119.	SISODIYA SHWETA PRASANNA	T.Y.BSc.
120.	SONAWANE PRITESH RAGHUNATH	T.Y.BSc.
121.	SONAWANE SACHIN BHARAT	T.Y.BSc.
122.	SONAWANE TRUPTI SHAMKANT	T.Y.BSc.
123.	SONWANE CHETAN SANTOSH	T.Y.BSc.
124.	SURYAVANSHI RAHUL RAJENDRA	T.Y.BSc.
125.	VALVI YOGESH RAJYA	T.Y.BSc.
126.	WAGH ASHVIN KISHOR	T.Y.BSc.
127.	WAGH KIRAN SHANTILAL	T.Y.BSc.
128.	WAGH MILIND ASHOK	T.Y.BSc.
129.		
130.		

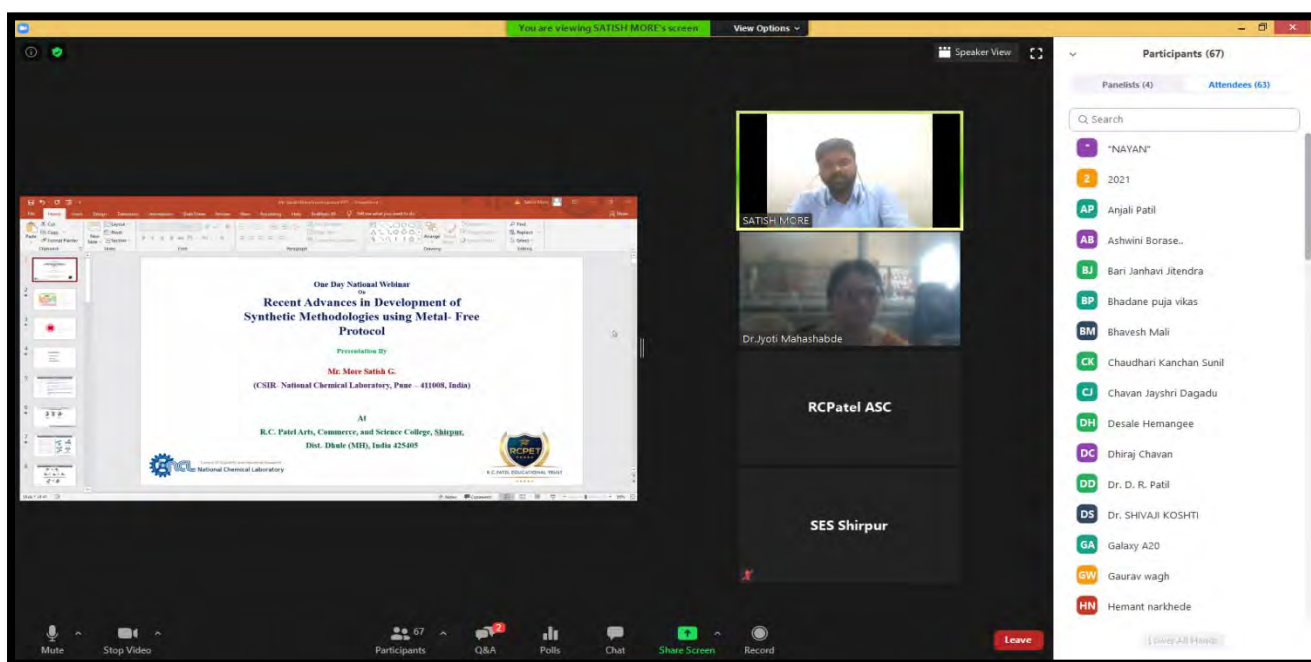
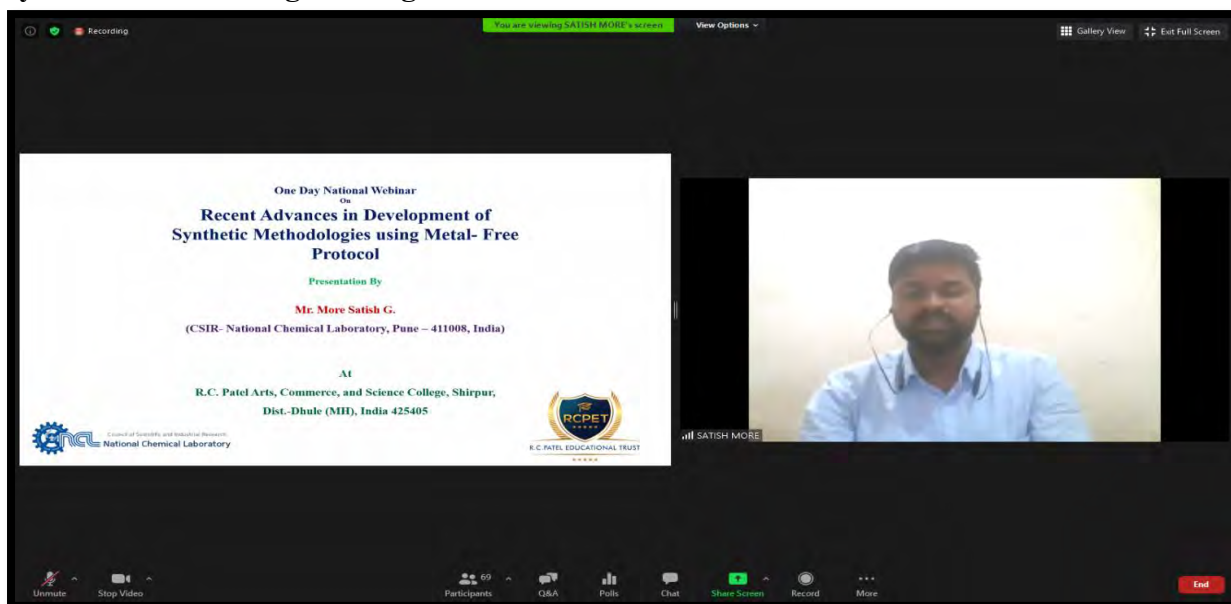


*Mahachabon*  
 Dr. J. P. Mahachabon  
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 Gandhinagar, Dist. Dhamdhama



	Sr. No.	Method used	Content
Academic Year 2021-22	1.	Expert Talk	Recent advance in Development of Synthetic Methodologies using metal Free Protocol
	2.	Expert Talk	Research methodologist in Chemical science by The Resource Person – Dr, Dipak S. Dalal
	3.	Expert Talk	Career Opportunities in Chemical Sciences and Importance of Organic Chemistry in Material Research”

### Expert Talk in One Day National Webinar On Recent advance in Development of Synthetic Methodologies using metal Free Protocol





Research methodologist in Chemical science by The Resource Person– Dr. Dipak S. Dalal

**R. C. PATEL ARTS, COMMERCE & SCIENCE COLLEGE, SHIRPUR, DIST-DHULE (425405)**  
DEPARTMENT OF CHEMISTRY in association with IOAC  
Organizes  
**One Day e-Workshop**  
On  
**"RESEARCH METHDODOGY IN CHEMICAL S**  
**(RMCS-2022)**  
9th Feb. 2022

**Chief Guest**  
Prin. Dr. S. S. Rajpurohit  
Professor & Chairman  
Board of Studies, Chemical Sciences  
Kavayitri Bahinabai Chaudhari  
North Maharashtra University  
Jalgaon

**Resource Person**  
Dr. Dipak S. Dalal  
Prof. & Head  
Department of  
Chemical Sciences  
KBCNMU, Jalgaon

**Organising Committee**  
Dr. R. D. Jadhav  
Vice-Principal  
Dr. J. P. Mahashabde  
Head of Chemistry  
Dr. D. R. Patil  
Principal  
Dr. A. M. Patil  
Vice-Principal  
Mr. J.P. Sonawane  
Coordinator

**Resource Person**  
Dr. Atul A. Shirkhedkar  
Vice-Principal & Head  
Department of Pharmaceutical Sciences

Zoom Meeting controls: Unmute, Start Video, Participants (17), Chat, Share Screen, Record, Reactions, Apps, Leave

Zoom Meeting  
Recording...  
View

Participants: 17  
Link to Unmute

Zoom Meeting controls: Unmute, Stop Video, Security, Participants (17), Public, Chat, Share Screen, Pause/Stop Recording, Reactions, More, End

System tray: Windows, Edge, File Explorer, Word, Zoom, 10:17 PM, 2/9/2022



## राष्ट्रीय कार्यशाळेत तज्ज्ञांचे मार्गदर्शन

**शिरपूर**

येथील आर.सी.पटेल महाविद्यालयात रसायनशास्त्र विभाग व आय.क्यू.ए.सी. अंतर्गत रिसर्च मेथडोलॉजी इन केमिकल सायन्सेस या विषयावर एकदिवसीय राष्ट्रीय ई-कार्यशाळा नुकतीच पार पडली.

कवियत्री बहिणाबाई चौधरी उत्तर महाराष्ट्र विद्यापीठ रसायनशास्त्र मंडळाचे अध्यक्ष डॉ.एस.एस.राजपूत यांच्याहस्ते उद्घाटन करण्यात आले. प्राचार्य डॉ.डी.आर.पाटील, उपप्राचार्य डॉ.ए.एम.पाटील व उपप्राचार्य आर.डी. जाधव उपस्थित होते. प्रमुख वक्ते डॉ.डी.एस.दलाल

यांनी प्रथम सत्रात संशोधनाच्या मूलभूत संकल्पना आणि कार्यपद्धती, योग्य संशोधन विषय, संशोधन समस्या, सिंथेटिक मेथॅडॉलॉजिस या विषयावर मार्गदर्शन केले. द्वितीय सत्रात डॉ.ए.ए. शिरखेडकर यांनी संशोधन साहित्य पुनरावलोकन, संशोधन कल्पना व संशोधन पेपर लेखन आणि गृहितक, संशोधन परिणाम या विषयांवर मार्गदर्शन केले.

प्रास्ताविक डॉ.जे.पी. महाशब्दे यांनी व प्रा.जे.पी. सोनवणे यांनी सूत्रसंचलन केले. आभार प्रा.आर.बी.चौधरी यांनी

मानले. या ई-कार्यशाळेत विविध महाविद्यालयातील ४०० हून अधिक प्राध्यापक, संशोधक आणि विद्यार्थ्यांनी सहभाग नोंदवला. रसायनशास्त्र विभाग प्रमुख डॉ.जे.पी.महाशब्दे, प्रा. आर.बी.चौधरी, प्रा.जे.पी. सोनवणे, प्रा.के.ए.पावरा, प्रा.व्ही.एस.पाटील, प्रा.एच.एस. कुलकर्णी, प्रा.एन.ए.बोरगावकर, प्रा.जी.डी.पाटील, प्रा.सी.एन. पवार, प्रा.पी.एस.जाधव यांनी संयोजन केले. त्यांना गणेश सोनार, संजय मोरे, बन्सीलाल चौधरी, डी.यु.पटेल, व्ही.जी.कासार यांनी मदत केली.

## पथदर्शी

### आर.सी.पटेल कला, वाणिज्य व विज्ञान महाविद्यालयाच्या रसायनशास्त्र विभागातर्फे ९ फेब्रुवारी रोजी एकदिवसीय ई-कार्यशाळेचे आयोजन

**शिरपूर-** आर. सी. पटेल कला, वाणिज्य व विज्ञान महाविद्यालयात ९ फेब्रुवारी रोजी सकाळी ११ वाजता रसायनशास्त्र विभाग इन अस्सोसिएशन विथ आय. क्यू. ए. सी. विभागांतर्गत रिसर्च मेथोडोलॉजी इन केमिकल सायन्सेस - (आरएमसीएस-२०२२) या विषयावर एकदिवसीय ई-कार्यशाळेचे आयोजन करण्यात आले आहे.

या ई-कार्यशाळेचे उद्घाटन

कवियत्री बहिणाबाई चौधरी उत्तर महाराष्ट्र विद्यापीठ रसायनशास्त्र अभ्यास मंडळाचे अध्यक्ष डॉ. एस. एस. राजपूत यांच्या उपस्थितीत होणार आहे. कार्यशाळेत प्रमुख वक्ते म्हणून डॉ. दिपक दलाल (विभाग प्रमुख-स्कूल ऑफ केमिकल सायन्सेस, क.व.चौ.उमवि, जळगाव) व उपप्राचार्य डॉ. अतुल शिरखेडकर (विभाग प्रमुख-फार्मस्युटिकल सायन्सेस, आर.

सी पटेल फार्मसी कॉलेज, शिरपूर) या प्रमुख अतिथींचे मार्गदर्शन लाभणार आहे. कार्यशाळा ऑनलाईन झूम प्रणालीवर संपन्न होणार आहे. सर्व पदवी व पदव्युत्तर विद्यार्थी, संशोधक व प्राध्यापकांनी या कार्यशाळेचा लाभ घ्यावा असे आवाहन महाविद्यालयाचे प्राचार्य डॉ. डी.आर. पाटील यांनी केले आहे.

या कार्यशाळेचे आयोजन

रसायनशास्त्र विभाग प्रमुख डॉ. जे. पी. महाशब्दे व (आरएमसीएस-२०२२ टीम) प्रा.आर. बी.चौधरी, प्रा.जे. पी. सोनवणे, प्रा. के.ए. पावरा, प्रा.व्ही.एस.पाटील, प्रा.एच.एस. कुलकर्णी, प्रा.एन. ए. बोरगावकर, प्रा.जी. डी. पाटील, प्रा.सी. एन.पवार, प्रा.पी. एस. जाधव व श्री. व्ही.जी.कासार यांच्या सहकार्याने संपन्न होत आहे.



**Career Opportunities in Chemical Sciences and Importance of Organic Chemistry in Material Research by Dr. Sachin Padghan from Department of chemical engineering (Fang Chia University, Taiwan)**

Zoom meeting interface showing Dr. Sachin Padghan in the main video window. The 'People' list on the right includes: Jyoti Mahashabde (You), 221 DIGAMBAR VISPUTE, A J, Aditya Bachhav, ANANDA PATIL, Anil Kasar, anita wagh, Anjali Patil, Anjana Pawara, Apama Shinde, Arpita Patil, and Ashwini Patil. The bottom toolbar shows icons for mute, video, chat, and share. The meeting ID is 'cdo-cqdd-wtn' and the time is 11:23 AM.

Zoom meeting interface showing a PowerPoint presentation slide. The slide title is "Career Opportunities in chemical sciences & Importance of chemistry in organic material Research" at R. C. Patel Arts, Commerce & Science College, Shirpur Dhule. The presenter is Dr. Sachin D. Padghan, Dept. Of chemical engineering, (Feng chia University, Taiwan). The slide features a colorful illustration of laboratory glassware. The 'People' list on the right includes: Jyoti Mahashabde (You), 221 DIGAMBAR VISPUTE, A J, Aditya Bachhav, ANANDA PATIL, Anil Kasar, anita wagh, Anjali Patil, Anjana Pawara, Apama Shinde, Arpita Patil, and Ashwini Patil. The bottom toolbar shows icons for mute, video, chat, and share. The meeting ID is 'cdo-cqdd-wtn' and the time is 11:21 AM.



सोमवार २९/६/२०२१

# पुण्य नगरी

पुण्य नगरी

## आर.सी. पटेल महाविद्यालयात रसायनशास्त्रावष्यं वेंबनार

शिरपुर : शहरातील आर.सी.पटेल एज्युकेशन ट्रस्ट संचालित आर. सी. पटेल कला, वाणिज्य आणि विज्ञान महाविद्यालयातील आय. क्यु. ए. सी. व रसायनशास्त्र विभागाच्या संयुक्त विद्यमाने एक दिवसीय राष्ट्रीय स्तरावरील करिअर ऑपर्युनिटी इन केमिकल सायन्सेस अँड इम्पोर्टन्स ऑफ ऑर्गॅनिक केमिस्ट्री इन मटेरियल रीसर्च या विषयावर ऑनलाईन वेबिनार घेण्यात आला.

प्राचार्य डॉ.डी.आर.पाटील, विभागप्रमुख डॉ.जे.पी.महाशब्दे, प्रा.जयवंत सोनवणे यांच्या



प्रयत्नांनी रसायनशास्त्र विभागाने टी.वाय.बी. एस्सी. आणि एम.एस्सी. (ऑर्गॅनिक केमिस्ट्री) च्या विद्यार्थ्यांसाठी राष्ट्रीय स्तरावर ऑनलाईन वेबिनार आयोजित करण्यात आले. या मध्ये व्याखाते म्हणून डॉ.सचिन पडघन यांनी मार्गदर्शन केले. वेबिनारमध्ये ३०० हून अधिक विद्यार्थ्यांनी सहभाग नोंदविला. या वेबिनारच्या यशस्वीतेसाठी प्रा.

राजश्री चौधरी, प्रा.निशा बोरगावकर, प्रा. कांतीलाल पावरा, प्रा.विजय पाटील, प्रा.कल्पेश पाटील, प्रा.नेहा मोरे, प्रा.हर्षल कुलकर्णी आदींनी सहकार्य केले.

	Sr. No.	Method used	Content
<b>Academic Year 2022-23</b>	1.	A State Level Seminar	Resource Person-Dr. S.T. Shinde Topic- Research Methodology For M.Sc.-I- and II-year students
	2.	Research Article Review discussion	Literature review for M.Sc.-II-year students
	3.	Poster Presentation	Poster Presentation on Organic Food for UG and PG students
	4.	Short Research Project	Research work done by Poster Presentation M.Sc.-II-year students

### A State Level Seminar on Research Methodology



### Resource Person: Dr. S. T. Shinde guide students about How to do Research in Chemical Sciences





**Poster Presentation on Organic Food for UG and PG students**





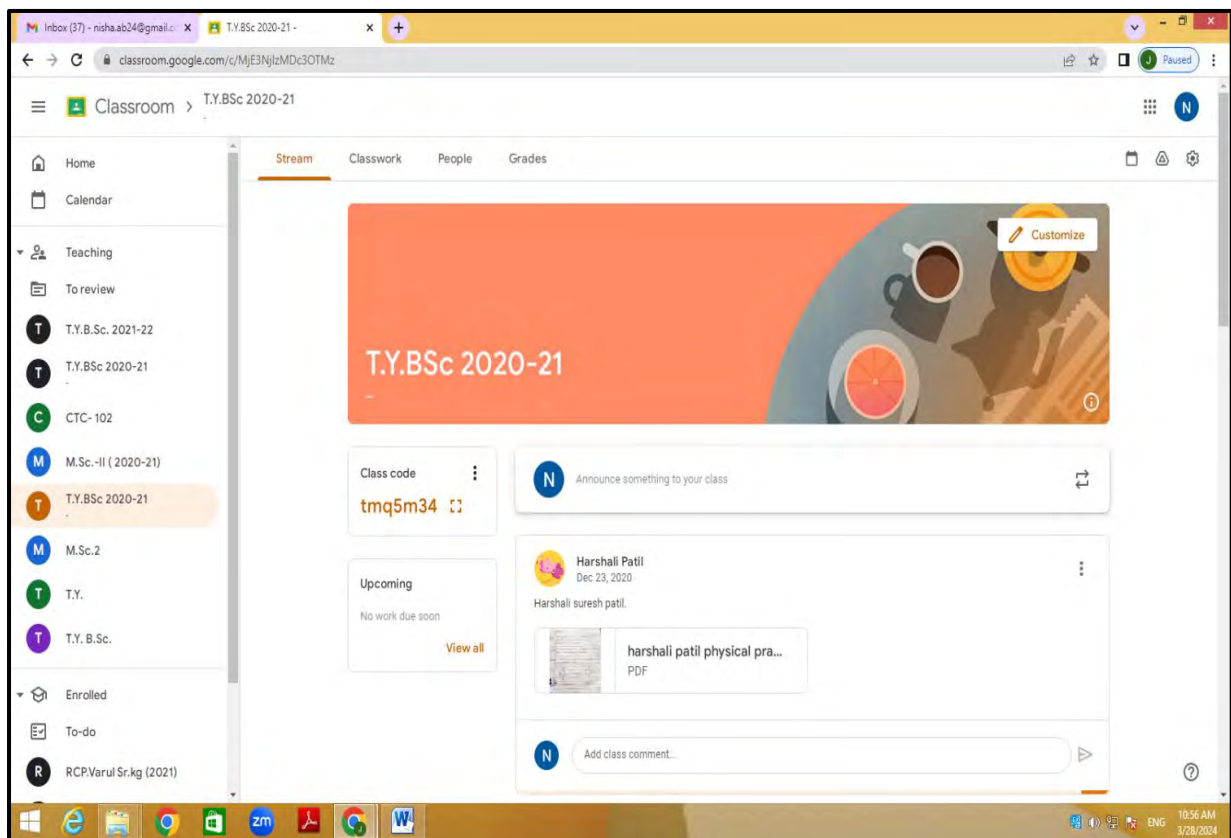
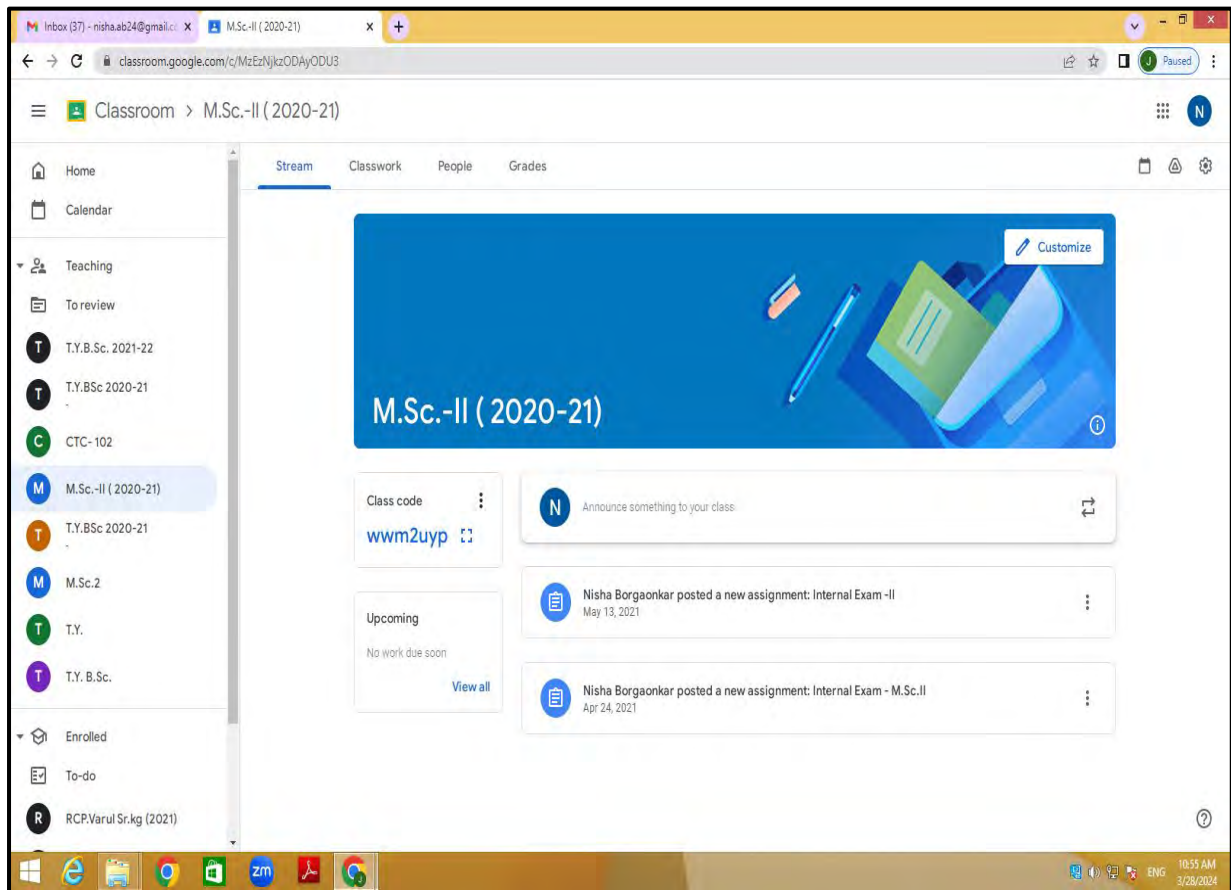
**R. C. Patel Educational Trust's**  
**R. C. Patel Arts, Commerce and Science College Shirpur**  
**Department of Chemistry**  
**The Details of ICT Pedagogy used in Teaching Learning Process**  
**For the academic year 2019-20**

Sr . No	Contents	Type of ICT Material	Source	Links
1.	Internal Exam Of T. Y. B.Sc.	Test using Google form or Testmoz	Drive	<a href="https://docs.google.com/forms/d/e/1FAIpQLSfRMQ0fqUi2uakzxxFF0DUWcMsfFDAIxjPoAAY6OOnjMwbqNA/viewform?usp=sf_link">https://docs.google.com/forms/d/e/1FAIpQLSfRMQ0fqUi2uakzxxFF0DUWcMsfFDAIxjPoAAY6OOnjMwbqNA/viewform?usp=sf_link</a>  <a href="https://docs.google.com/forms/d/e/1FAIpQLSfzFYsMPQjY7VAUhbd0Wk4qB9Jk7qtoXgdonGBobVXcZelcJQ/viewform?usp=sf_link">https://docs.google.com/forms/d/e/1FAIpQLSfzFYsMPQjY7VAUhbd0Wk4qB9Jk7qtoXgdonGBobVXcZelcJQ/viewform?usp=sf_link</a>

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**The Details of ICT Pedagogy used in Teaching Learning Process**  
**For the academic year 2020-21**

Sr. No.	Contents	Type of ICT Material	Source	Links
1	F.Y .B.Sc. S.Y.B.Sc. T.Y.B.Sc.	Test using Google form or Test	Drive	<a href="https://docs.google.com/forms/d/e/1FAIpQLSdFvxmpbTkRXrRoCD5gsa9d21I1Nf_9EOQTlio0JnJ_e-Rbw/viewform?usp=sf_link">https://docs.google.com/forms/d/e/1FAIpQLSdFvxmpbTkRXrRoCD5gsa9d21I1Nf_9EOQTlio0JnJ_e-Rbw/viewform?usp=sf_link</a>  <a href="https://docs.google.com/forms/d/e/1FAIpQLSdjIq-C55yKMDaO6SNNv9dVrBwGjKl4S-Fo2tb_bxDt5zs3FA/viewform?usp=sf_link">https://docs.google.com/forms/d/e/1FAIpQLSdjIq-C55yKMDaO6SNNv9dVrBwGjKl4S-Fo2tb_bxDt5zs3FA/viewform?usp=sf_link</a>  <a href="https://docs.google.com/forms/d/e/1FAIpQLSeHI8nyxBZDeWh9kr-0pYdBvWza9YPtkjJQoYk_jijToWuDaQ/viewform?usp=sf_link">https://docs.google.com/forms/d/e/1FAIpQLSeHI8nyxBZDeWh9kr-0pYdBvWza9YPtkjJQoYk_jijToWuDaQ/viewform?usp=sf_link</a>  <a href="https://docs.google.com/forms/d/e/1FAIpQLSc1i7jjirS5g6a2rZhomc-xAaQLWSugT6POXW0q80Cw3BpTiw/viewform?usp=sf_link">https://docs.google.com/forms/d/e/1FAIpQLSc1i7jjirS5g6a2rZhomc-xAaQLWSugT6POXW0q80Cw3BpTiw/viewform?usp=sf_link</a>

# Google Classroom Glimpses



**Department  
Of  
Computer Science**



**Student Centric Learning (Pedagogies Used)**

**Department of Computer Science**

**Pedagogy used for Teaching –**

- In the curriculum, students are developed by teaching basic concepts and core knowledge through core subjects such as fundamental computer science, database management system, software engineering, system programming, operating systems, and others.
- In addition to core subjects, students are developed through hands-on practice in practical subjects by teaching programming languages and various tools such as C, C++, Java, Python, SQL.
- Core knowledge is implemented by teaching various practical tools like Weka Explorer, Anaconda, VSCode, Matlab, Eclipse IDE, etc.
- Project Development – At the end of the last semester of PG, students apply their knowledge to develop a project.

• **Tools and Materials used-**

- Black board / White Board in class room teaching.
- Smart Board for demonstration and Presentation in class room
- Seminar method in classroom in student involving in teaching learning process.
- Overhead projectors as well as smartboards are used to demonstrate practicals in laboratory.
- Regular assessment of student periodically
- Oral assessment in laboratory as well as classroom.

□ **Description of the Methods -**

- Black Board teaching is useful tool (smart boards) to understand the topic in audio and visually at the same time to students. Secondly assignments are given to students for broader thinking in fact they achieve learning outcomes like think unimaginable.
- Practical Work: In Assignments decided by university is implemented in laboratory apart from that additional practicals are also conducted to clear the concepts.

□ **Outcomes (Learning Experience)–**

- a. Understand basic and core knowledge.
- b. Expert in implementing in concept using programming languages.
- c. Develop their own projects.
- d. Confident and involved learners.
- e. Developed Soft skills.
- f. Learning surveys and Computers allows students to learn about the concepts and gain skills as logical & critical thinking, problem-solving skills.

## Experiential Learning

Academic Year 2018-19	Sr. No.	Method used	Content
	1.	Project Work	M.Sc.-II

### MSc II Project Work 2018-19

Sr. No.	Name of Student	Project Work	Name of Project Guide
1.	Sonawane Harshada Kishor	College management System	Mr. S. D. Mone
2.	Chavhan Sapana Kailas	Election Analysis	
3.	Deore Swati Sharad	Advanced Reliable Real Estate Portal	
4.	Patil Harshada Arun	Image Processing by using Python	
5.	Saindane Sonal Mahendra	Admission Enquiry Chat Bot Project	Mr. B. S. Panchbhai
6.	Hajare Pooja Baban	Android Smart City Travelling Project	
7.	Patil Kanchan Rajendra	Secure Online Auction Portal Project	
8.	Mittal Rina Govind	Detection of Credit Card Fraud System	
9.	Patil Gitanjali Kailas	Real Estate Search Based on the Data Mining	Mr. A. J. Maheshwari
10.	Girase Ashwini Baburao	Robotic Vehicle Controlled by Using Voice	
11.	Kulakarni Pooja Sanjay	Heart Disease Prediction: Final Year Projects for CSE	
12.	Deshmukh Shital Sunil	Student Attendance by using Fingerprint Reader	
13.	Patil Pallavi Ravindra	Cloud Computing for Rural Banking Project	
14.	Shelar Ashwini Pintu	Opinion Mining for Comment Sentiment	

		nalysis	Mr. D. E. Chavan
15.	Girase Vaishali Sanju	Web Mining for Suspicious Keyword Prominence	
16.	Patil Rajeshri Santosh	Movies recommendations by using Machine Learning	
17.	Salunkhe Vaishnavi Nandu	Online Live Courier Tracking and Delivery System Project	Mr. Sonawane M. R.
18.	Patil Suvarna Bhatu	E-commerce Website	
19.	Yeshi Krutika Dhondu	Fitness Tracker	
20.	Sisode Meghna Pratik	Image Processing by using Java	
21.	Marathe Kamalesh Ramesh	Content Management System	Ms. Patil Komal P.
22.	Nikam Sapana Rajesh	Blog Platform	
23.	Sawle Mohini Yuvraj	Event Management System	
24.	Badagujar Kavita Vikas	Portfolio Website	
25.	Patil Ashwini Sham	Expense Tracker	Ms. Rajput Mayuri
26.	Chaudhari Kanchan Sunil	To-Do List App	
27.	Girase Ashwini Raviraj	Recipe App	



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Academic Year 2019-20	Sr. No.	Method used	Content
	1.	Project Work	M.Sc.-II
	2.	Quiz	C Programming Language

### M.Sc.- II Project Work 2019-20

Sr. No.	Name of Student	Project Work	Name of Project Guide
1.	Patil Harshada Abhijeet	Weather App	Mr. S. D. Mone
2.	Borse Madhuri Ravindra	Stock Market Predictor	
3.	Koli Bharti Ashok	Recommendation System	
4.	Pawar Gayatri Kailas	Image Recognition	
5.	Mahale Pranali Manohar	Network Monitoring Tool	Mr. B. S. Panchbhai
6.	Bhavsar Chaitali Vasudeo	Intrusion Detection System	
7.	Patil Mahima Gulabarao	Secure Messaging App	
8.	Nikam Aishwarya Pradip	Firewall Management	
9.	Deorw Prajakta Bharat	Password Manager	Mr. A. J. Maheshwari
10.	Borse Harshada Yuvraj	Autonomous Drone	
11.	Karanke Soniya Shantaram	Student Information System	
12.	Girase Shubhangi Pankaj	Hospital Management System	
13.	More Jagruti Anil	Online Library System	Mr. D. E. Chavan
14.	Patil Roma Vilas	SQL Injection Prevention	
15.	Patil Namrata Chandrakant	Firewall Rules Analyzer	
16.	Rajput Mayuri Yogeshsingh	Data Encryption	
17.	Patil Namrata Suresh	AR Navigation App	Ms. Sonawane Megha R.
18.	Patil Suvarna Sham	Smart Automation Smart Agriculture	
19.	Wagh Poonam Devidas	Bug Tracking System	
20.	Sonawane Harshada Nandkishor	Block Chain Voting System	
21.	Patil Vijaya Virendra	Version Control System	Ms. Hajare Pooja B.
22.	Mali Pratibha Daulat	Smart Contrast	
23.	Patil Ankita Dayaram	Voice Controlled Robot	
24.	Mali Namrata Dhondu	Cloud Security	Ms. Patil Gitanjali K.
25.	Patil Savita Ramesh	Malware Detection	
26.	Wagh Pranita Sanjay	Real-Time Data Visualization	



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**F. Y. BSc Quiz**



**S.Y.B.Sc. Quiz**



**T. Y. B.Sc. Quiz**



**M.Sc.. I and M.Sc.. II**







Academic Year 2020-21	Sr. No.	Method used	Content
	1.	Project Work	M.Sc.-II

**Project List MSc II Project Work 2020-21**

Sr. No.	Name of Student	Project Work	Name of Project Guide
1.	Sonawane Pruthvi Sanjay	Online Bookstore Management System	Mr. S. D. Mone
2.	Kadhare Aishwarya Rajendra	Online Grocery Shopping System	
3.	Talwale Sunayana Rohidas	Student Grade Management Tool	
4.	Mali Harshada Arun	Personal Expense Tracker App	
5.	Thakare Tejashri Kishor	Weather Forecast Web Application	
6.	Bari Vaishanvi Jagdish	College Management System	Mr. B. S. Panchbhai
7.	Girase Gautami Mahendrasing	Recipe Sharing Platform	
8.	Gujar Nitin Pradip	Employee Leave Management System	
9.	Patil Vishal Narher	Online Voting System	Mr. A. J. Maheshwari
10.	Patil Ruchita Yuvraj	Library CatLog System	
11.	Biradi Shital Bhatu	Car Pooling Application	
12.	Patil Shubham Rajendra	Appointment Booking System	
13.	Patil Pallavi Anil	Online Music Streaming Service	Mr. D. E. Chavan
14.	Bhamare Priyanka Daulat	Teachers Work Management System	
15.	Valvi Pradya Sakharam	Parking Space Finder	
16.	Patil Pratiksha Nimba	Classified Ads Portal	
17.	Patil Vijay Bhagwat	E-Learning Platform	
18.	Parmar Priyanka Jitendra	Inventory Tracking System	Ms. Sonawane Megha R.
19.	Deore Sapana Ramesh	Budget Management Tool	
20.	Patil Madhuri Vishwas	Social Media Analytics Dashboard	
21.	Patil Nutan Pradip	Location-based Reminder App	Ms. Hajare Pooja B.
22.	Rajput Pooja Ravindra	Online Event Registration System	
23.	Shimpi Roshani Dilip	Flight Booking Portal	
24.	Sonawane Punam Bhila	healthcare Appointment Scheduler	
25.	Patil Madhuri Sambhaji	Tourist Information Website	
26.	Bagal Varsha Vijendra	Online Job Search Platform	Ms. Patil Gitanjali K.
27.	Bagul Jayshree Haridas	Recipe Recommendation System	
28.	Rajput Suverna Himmatsing	Expense Sharing App	
29.	Patil Jagruti Daga	Sports Event Management System	



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Academic Year	Sr. No.	Method used	Content
2021-22	1.	Project Work	M.Sc.-II

### MSc II Project Work 2021-22

Sr. No.	Name of Student	Project Work	Name of Project Guide
1.	Buwa Sagar Barku	Crime Rate Prediction	Mr.S. D. Mone
2.	Rajput Priyanka Udaysing	Healthcare Facility Management Solution	
3.	Chaudhari Shubham Lotan	News Feed Application	
4.	Shinde Jaya Mahendra	Student Attendance Management System	
5.	Sonar Kaushal Sanjay	Hateful Meme Detection	
6.	Dhakad Nisha Kailas	Online food ordering system	Mr.B. S. Panchbhai
7.	Patil Ashwini Nageshwar	Electronic Authentication System	
8.	Patil Nikita Yuvraj	Hostel Management System	
9.	Rajput Neha Yogendrasing	Weather Forecasting APP	
10.	Rajput Vaishanvi Pravinsing	News Feed App	
11.	Borse Devyani Dongar	Optical Character Recognition System (OCR)	Mr. A. J. Maheshwari
12.	Borse Priyanka Anna	Real-time web search engine	
13.	Pawar Rahul Bhimrao	Task Management Application	
14.	Saindane Suresh Shankar	Android Battery Saver System	
15.	Shinde Bhavna Sharad	Online eBook Maker	Mr. D. E. Chavan
16.	Gunjal Suraj Balasaheb	Mobile Wallet with Merchant Payment	
17.	Patil Ruchika Kishor	Bank Management System	
18.	Shinde Dipali Amrut	Restaurant Booking Website	
19.	Tirmale Avinash S.	SMS Spam Filtering	Ms. Hajare Pooja B.
20.	Borse Nikita Ravindra	Twitter Sentiment Analysis	
21.	Chaudhari Laxmikant Sudhar	Online Auction System	
22.	Chaudhari Lakita Ravindra	Face Detection	



23.	Brahmankar Pradnya Ravindra	Chat App	Ms. Patil Gitanjali K.
24.	Girase Bharti Dipak	Task Management Application	
25.	Jamadar Tejaswini Balu	Real-time web search engine	
26.	Mahale Tejal Abhay	Virtual Private Network	
27.	Marathe Gauri Kailas	Library Management System	Ms. Bholane A. S.
28.	Patil Dhanashri Ravindra	College Management System	
29.	Patil Rahul Kailas	Hospital Management System	
30.	Patil Roshni Jibhu	News Feed App	



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Academic Year 2022-23	Sr. No.	Method used	Content
	1.	Project Work	M.Sc.-I And M.Sc.-II
2.	Quiz Competition	Java Programming Language	

### MSc II Project Work 2022-23

Sr. No.	Name of Student	Project Work	Name of Project Guide
1.	Pawara Lakshmi Ambalal	Online Coffee Shop	Mr. S. D. Mone
2.	Thakare Chetana Hiranman	Online Doctor Appointment System	
3.	Badgujar Neha Kiran	Life Insurance	
4.	Khairnar Sapna Vilas	Online Quiz System	
5.	Rajput Truti Pankaj	Recipe Management System	Mr. B. S. Panchbhai
6.	Wagh Bhagyshree Bhatu	Employee Attendance Tracker	
7.	Patil Pallavi Sunil	Task Management App	
8.	Gavit Amish Gajanan	Library Management System	Mr. A. J. Maheshwari
9.	Wagh Ruchita Girish	Online Pizza Ordering	
10.	Jadhav Rahul Amrut	Car Rental Management System	
11.	Marthe Durgesh Shantaram	Appointment Scheduling System	
12.	Bhoi Archana Jayesh	Online Shopping Cart	Mr. Chavan D. E.
13.	Patil Megha Manoj	Hotel Reservation System	
14.	Patil Ruchita Balu	Health and Fitness Tracker	
15.	Patel Trupti Karan	Music Player with Playlist Management	Ms. A. S. Bholane
16.	Chavan Megha Sunil	To-Do List Application	
17.	Patil Mayuri Dhondu	Crop Prediction	Mr. R. K. Patil
18.	Jadhav Jagruti Ravindra	Classified Ads Website	
19.	Patil Harshada Ramesh	Online Course Registration System	
20.	Patil Madhuri Rajendra	Inventory Management System	Mr. D. U. Patil
21.	Badgujar Megha Pravin	Personal Finance Manager	
22.	Patil Dipali Dhudku	Social Media Analytics Tool	
23.	Mahajan Kamini Arun	Furniture Management System	
24.	Yelve Neha Kishor	Bus Booking System	Mr. S. H. Rajput
25.	Patil Bhavesh Harshal	Medical Appointment Scheduler	
26.	Kapole Isha Omkar	Event Management System	
27.	Gujrathi Bhupendra Suresh	Flight Reservation System	



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## Quiz Competition



## Quiz Competition



Academic Year	Sr. No.	Method used	Content
2022-23	1.	PPT Presentations	Machine learning

**PPT Presentation on machine learning**



**PPT Presentation on Machine Learning.**



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**For the academic year 2020-21**

Sr. No	Faculty Name	Link
1.	Mr. A. J. Maheshwari	<p>Paper -II C-PROGRAMMING 2020-21 Class code eup5hkc  url <a href="https://classroom.google.com/c/MjQyNTY0NzgyODgz">https://classroom.google.com/c/MjQyNTY0NzgyODgz</a></p> <p>CS_301 SOFTWARE ENGINEERING M.Sc.. 2020-21 Class code is er2pw</p> <p>=manufactured Internal Test-I CS_403 Data warehousing and Mining 20-21  <a href="https://docs.google.com/forms/d/e/1FAIpQLScPhVC2bTUyEbmSFzrXTkzFzIcT4erl_kjiUmTBUlyukmMbiA/viewform?usp=pp_url&amp;entry.1585844893">https://docs.google.com/forms/d/e/1FAIpQLScPhVC2bTUyEbmSFzrXTkzFzIcT4erl_kjiUmTBUlyukmMbiA/viewform?usp=pp_url&amp;entry.1585844893</a></p> <p>CS_301 Software Engineering Test-III  <a href="https://docs.google.com/forms/d/e/1FAIpQLScPhVC2bTUyEbmSFzrXTkzFzIcT4erl_kjiUmTBUlyukmMbiA/viewform?usp=pp_url&amp;entry.1585844893=manufactured">https://docs.google.com/forms/d/e/1FAIpQLScPhVC2bTUyEbmSFzrXTkzFzIcT4erl_kjiUmTBUlyukmMbiA/viewform?usp=pp_url&amp;entry.1585844893=manufactured</a></p>
2.	Mr. S. D. Mone	<p>Assingment  <a href="https://classroom.google.com/c/NDUwMDMxODYxMjMz/a/NDQ0MDUyNTY3NTAx/details">https://classroom.google.com/c/NDUwMDMxODYxMjMz/a/NDQ0MDUyNTY3NTAx/details</a></p> <p>Internal test  <a href="https://classroom.google.com/c/NDQ5ODA0MTgwNDIz/a/NDUyOTQ1MzY3MTI4/details">https://classroom.google.com/c/NDQ5ODA0MTgwNDIz/a/NDUyOTQ1MzY3MTI4/details</a></p>
3.	Mr. B.S. Panchbhai	<p>SYBSC (CS) 20-21  Semester I  C++ Programming-I  <a href="https://classroom.google.com/c/NDQxNjM2MzY4MDIz?cjc=glvd2cy">https://classroom.google.com/c/NDQxNjM2MzY4MDIz?cjc=glvd2cy</a></p> <p>TYBSc Computer Science  Sem.II  Java Programming  <a href="https://classroom.google.com/c/MjcwODYyNDU4NzJa?cjc=2psv4q4">https://classroom.google.com/c/MjcwODYyNDU4NzJa?cjc=2psv4q4</a></p>
4.	Mr. D. E. Chavhan	<p>msc-II  <a href="https://classroom.google.com/c/MzY2OTUwOTUzMTA0?cjc=quigbhy">https://classroom.google.com/c/MzY2OTUwOTUzMTA0?cjc=quigbhy</a></p> <p>tybsc  <a href="https://classroom.google.com/c/MjcwOTE0MDc1OTha?cjc=fpagscx">https://classroom.google.com/c/MjcwOTE0MDc1OTha?cjc=fpagscx</a></p> <p>fybsc  <a href="https://classroom.google.com/c/MjQ4MTIwNTM3MDUz?cjc=mozdouh">https://classroom.google.com/c/MjQ4MTIwNTM3MDUz?cjc=mozdouh</a></p>



### Online Teaching Learning Resource Link – 2021-22

Sr. No	Faculty Name	Link Google classroom and Assignments
1.	Mr. A. J. Maheshwari	<p>C-Programming- I and II 2022-2023 Class code: pwf7l2h url: <a href="https://classroom.google.com/c/NTAxMzE3MDU3NzEz">https://classroom.google.com/c/NTAxMzE3MDU3NzEz</a></p> <p>Exam link : CS_505 Python programming-I <a href="https://docs.google.com/forms/d/e/1FAIpQLScoo9IORwaZUn5AtoH9Rr-0mHNfnJW8zRgnmTT2HFszBv4Ocg/viewform?usp=pp_url_2021-22">https://docs.google.com/forms/d/e/1FAIpQLScoo9IORwaZUn5AtoH9Rr-0mHNfnJW8zRgnmTT2HFszBv4Ocg/viewform?usp=pp_url_2021-22</a></p>
2.	Mr. S. D. Mone	<p>Google class room for S.Y.B.Sc. pirv5xp May 2021 Practical examination <a href="https://classroom.google.com/c/MjcwODc1MzE0MDFa/p/MzM0NjgzODE5ODQ4/details">https://classroom.google.com/c/MjcwODc1MzE0MDFa/p/MzM0NjgzODE5ODQ4/details</a></p>
3.	Mr. B.S. Panchbhai	<p>TYBSc21-22 Computer Graphics <a href="https://classroom.google.com/c/NDA0NzU3OTQ0OTkw?cjc=e2noh6d">https://classroom.google.com/c/NDA0NzU3OTQ0OTkw?cjc=e2noh6d</a></p> <p>MscI 2021-2022 Sem.II (Compiler Construction) <a href="https://classroom.google.com/c/MjcxNDEwNTI1MjZa?cjc=t43cfso">https://classroom.google.com/c/MjcxNDEwNTI1MjZa?cjc=t43cfso</a></p> <p>Class : M.Sc. Computer Science MSc-II 2021-2022 Sem-IV Natural Language Processing <a href="https://classroom.google.com/c/NDY4NzA0Mjc1NjMx?cjc=2vm4s">https://classroom.google.com/c/NDY4NzA0Mjc1NjMx?cjc=2vm4s</a></p>
4.	Mr. D. E. Chavhan	<p>m-sc-I <a href="https://classroom.google.com/c/OTMyNTIwMTU4NzZa?cjc=3ds4lei">https://classroom.google.com/c/OTMyNTIwMTU4NzZa?cjc=3ds4lei</a></p> <p>m-sc-I <a href="https://classroom.google.com/c/MjcyODc4MDE4ODNa?cjc=gfnjyyk">https://classroom.google.com/c/MjcyODc4MDE4ODNa?cjc=gfnjyyk</a></p> <p>MSC-II <a href="https://classroom.google.com/c/MTUzNzE5NDMyOTM0?cjc=33g5jahs">https://classroom.google.com/c/MTUzNzE5NDMyOTM0?cjc=33g5jahs</a></p>

**Department  
Of  
Microbiology  
&  
Biotechnology**

**Student Centric Learning (Pedagogies Used)**

**Department of Microbiology & Biotechnology**

- **Pedagogy used for Teaching –**  
Participatory Learning, Classroom Teaching, Interactive Sessions and Cutting-Edge Practice, Blended Learning, Flipped classroom.
- **Tools and Materials used-**
  - a. Blackboard or whiteboard
  - b. Projectors.
  - c. Computers for Bioinformatics practical demonstrations
  - d. PPTs.
  - e. Teaching and learning resources- Reference Books /Text books, other references, films, radio programs, multimedia, digital learning resources including video, audio, animation and images, expert lectures
  - f. Softwares used- M e g a 6 , C l u s t a l W , Rasmol software, etc.
- **Description of the Methods –**
  1. Teaching methods are the broader techniques used to help students achieve learning outcomes, while activities are the different ways of implementing these methods.
  2. Practical Work: all teaching and learning activities in the sciences in which the student is actively involved and that allow the mobilization of science processes skills and scientific knowledge and that may be materialized by paper and pencil activities or observing and/or manipulating materials.
- **Outcomes (Learning Experience) -**
  - 1: A strong sense of identity.
  - 2: Connection to and contribution with their world.
  - 3: A strong sense of wellbeing.
  - 4: Confident and involved learners.
  - 5: Soft skills.
  - 6: Learning Computers & Bioinformatics allows students to learn about the concepts and gain skills as logical & critical thinking, problem-solving, management skills



## Experiential Learning

Academic Year 2018-19	Sr. No.	Method used	Content
	1.	Project Work	M. Sc-II
2.	Industrial Visits	T. Y. B.Sc	

### Project Work

*A Survey of Tuberculosis and Sickle Cell Anemia in North Maharashtra Region of India*

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**Department of Microbiology**

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web : www.rcpatelshirpur.in

---

## CERTIFICATE

This is to certify that, the dissertation work entitled "A Survey of Tuberculosis and Sickle Cell Anemia in North Maharashtra Region of India" is the original research work carried out by **Ms. Dhanashri J. Mujumdar, Ms. Mariya M. Saifree, Ms. Megha D. Pawar, Ms. Saalishi H. Maheshwari and Ms. Yogita S. Patil** under the supervision of **Mr. Sandip P. Patil**, for the partial fulfillment of the degree of Master of Science (Microbiology) during the academic year 2017-2018 at R. C. Patel A. C. S. College, Shirpur.

Place: Shirpur  
Date: 11/04/2018

  
**Prof. Sandip P. Patil**  
 Project Guide,  
 Department of Microbiology



  
**Dr. Ullas K. Patil**  
 Head,  
 Department of Microbiology

  
 External Examiner

  
 Internal Examiner

---

Project Dissertation - M. Sc. [Microbiology]: 2017-2018 Page 2

## Project Work

KAVAYITRI BAHINABAI CHAUDHARI NMU, JALGAON  
R.C.PATEL ARTS, COMMERCE AND SCIENCE COLLEGE,  
SHIRPUR  
DEPARTMENT OF BIOTECHNOLOGY

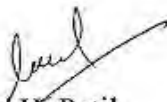


## CERTIFICATE


This is to certify that the work entitle “To Study the Isolation of *Azotobacter* and it’s Application as a Bio- Fertilizer” is a carried out by Miss. Bhavsar Shruti S, Miss. Navale Sneha V, Miss. Patil Karishma Y, Mr. Shimpi Rupesh G and Miss. Verma Anupama O. under the supervision of Dr. R.H. Patil at department of biotechnology, R. C.Patel ACS College, Shirpur towards the partial fulfilment of master of Science in Biotechnology during the academic year 2018-2019.

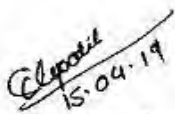
Place: Shirpur

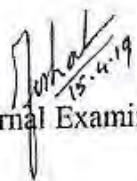
Date: / 4 / 2019

  
Dr. R. H. Patil  
Project Guide,  
Department of Biotechnology



  
Dr. R. H. Patil  
Head,  
Department of Biotechnology

  
Internal Examiner

  
External Examiner

## Project Work



Department of  
**MICROBIOLOGY &  
BIOTECHNOLOGY**

R.C.Patel A.C.S.College,  
Shirpur (Dist-Dhule), MS  
Tel: ( 02563)-257328(Off.)  
Web: www.mbbtshirpur.in

### CERTIFICATE

This is to certify that project entitled “Production and purification of Xylanase from *Aspergillus niger* isolated from corn cobs” is the original research work carried out by **Mr. Shubham Saner, Ms. Nilam Mali, Ms. Neha More, Ms. Manish Patil, and Ms. Sunayana Ahire** under supervision of **Dr. Sandip P. Patil** and **Prof. Leena P. Shirsath** in the partial fulfilment of degree of **Master of Science (Microbiology)** during the academic year 2018-19 at R. C. Patel A. S. C. College, Shirpur.

The work presented in this dissertation was carried out under my guidance and supervision. The findings reported in this dissertation are not allowed to publish in any journal without the permission from research guide.

Place: Shirpur

Date: 20/04/2019

**Dr. Sandip P. Patil**  
Project Guide

**Prof. Leena P. Shirsath**  
Project Co-guide

**Dr. Ravindra H. Patil**  
Head of department

  
21/04/19  
External Examiner



**Project List (2018-19) M.Sc. -II (Microbiology)**

Sr. No.	Name of Students	Project Title	Name of Project Guide
1.	Girnar Dipti Dhurandhar	Isolation, characterization and evaluation probiotic properties of lactobacilli isolated from different flowers	Dr. M. P. Patil
2.	Gurav Mahesh Ashok		
3.	Patil Pradip Chhagan		
4.	Valvi Sunil Chamarya		
5.	Patil Rupali Vilas		
6.	Khatik Riza Bano Mohiyoddin	Decolourisation of textile dye by laccase from bacterial isolate	Dr. S. P. Patil
7.	Kulkarni Monika Keshav		
8.	Mali Nilam Vilas		
9.	Mali Nilam Vilas		
10.	Suryawanshi Prachi		
11.	More Neha Patingrao	Studies on the use of consortia of plants extract and its antibacterial activity against dental pathogens	Dr. M. R. Patil
12.	Patil Prajakta Madhukar		
13.	Patil Manisha Ramchandra		
14.	Patil Megha Vinayak		
15.	Ahire Sunayana Shivaji		
16.	Saner Shubham Suresh	Evaluation of insecticidal efficacy of <i>Moringa oleifera</i> and <i>ricinus communis</i> extract against alurolobus	Dr. R. H. Patil
17.	Wani Pratik Mohan		
18.	Pawar Shubham Somnath		
19.	Dhanwani Mamata Dheeraj		
20.	Lohar Prashant Navneet		
21.	Patil Ashwin Govind		
22.	Gujar Mayuri Prakash		
23.	Pawar Shubham Somnath		
24.	Dhanwani Mamata Dheeraj		



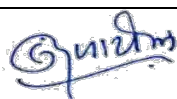
**Dr. S. P. Patil  
HOD**

**Dept. of Microbiology & Biotechnology**



## Project List M.Sc-II (Biotechnology)

Sr. No.	Name of Students	Project Title	Name of Project Guide
1.	Bhavsar Shruti Sunil	To study the isolation of <i>Azotobacter</i> and its applications as biofertilizers	Dr. L. P. Shirsath
2.	Navale Sneha Vilas		
3.	Patil Karishma Yashvant		
4.	Shimpi Rupesh Gopal		
5.	Verma Anupama Omprakash		
6.	Bhavsar Shruti Sunil		
7.	Patel Minakshi Krushnadas	Synthesis of silver nanoparticles from <i>azadirachta indica</i> and its antifungal activity	Ms. Madhavi Shirsath
8.	Pathanmuzammil Mukhtar Khan		
9.	Birhade Bharti Ramesh		
10.	Borase Amol Amrutlal		
11.	Patil Shubham Khushal	Isolation of endophytic fungi from indigenous plant and its anti-inflammatory activity	Ms. A. A. Joshi
12.	Pawar Diksha Prabhakar		
13.	Pawar Gayatri Panilal		
14.	Salunke Shweta Vikas		
15.	Sonar Aditi Rajendra	Antibacterial potential and phytochemical potential of <i>Curcuma longa plant</i>	Ms. A. C. Patil
16.	Kanungo Monika Madhusudan		
17.	Borse Chetan Nilkantha		
18.	Kanungo Monika Madhusudan		



**Dr. S. P. Patil**  
HOD  
Dept. of Microbiology &



**Biotechnology**

## Industrial Visit





**Industrial Visits at Schon Pharmaceuticals Limited, Indore**



Academic Year	Sr. No.	Method used	Content
2019-20	1.	Industrial Visit	T.Y.B.Sc

## Project Work



**R.C. Patel Art's, Science and Commerce  
College, Shirpur**  
Tel: (02563) -257328 (Off.) (02563)-259034, Fax: (02563)-255189

**Department of Microbiology and Biotechnology**



**CERTIFICATE**

This is to certify that project entitled “Evaluation of Insecticidal Efficacy of *Moringa oleifera* and *Ricinus communis* extract against *Aleurolobus barodensis*.” submitted for partial fulfilment of Degree of “Master of Science in Microbiology” was carried out in the laboratories of R. C. Patel A. S. C. College, Shirpur. Submitted by **Miss. Dhanwani Mamta D., Mr Pawar Shubham S., Mr. Lohar Prashant N., Mr. Patil Ashwin G. and Miss. Gujar Mayuri P.** The work is presented in this dissertation was carryout under my guidance and supervision.

**Place:** Shirpur **Date:** 21/04/2019



**Dr. Ravindra H. Patil.**  
Head,  
Department of Microbiology  
and Biotechnology



**Dr. Ravindra H. Patil.**  
Head,  
Department of Microbiology  
and Biotechnology



**Internal Examiner**



**External Examiner**





## Project Work



**R.C. Patel Art's, Science and Commerce  
College, Shirpur**  
Tel: (02563)-257328 (Off.) (02563)-259034, Fax: (02563)-255189

---

**Department of Microbiology and Biotechnology**

**CERTIFICATE**

This is to certify that project entitled "Isolation, Characterization and Evaluation of Probiotic Properties of *Lactobacillus* from Different Flowers." submitted for partial fulfilment of Degree of "Master of Science in Microbiology" was carried out in the laboratories of R. C. Patel A. S. C. College, Shirpur. Submitted by **Miss. Girnar Dipti D. Miss. Patil Rupali v. Mr. Patil Pradip C. Mr. Gurav Mahesh A. Mr. Valvi Sunil C.**

The work is presented in this dissertation was carryout under my guidance and supervision.

**Place: Shirpur** **Date: 21/04/2019**

 <b>GUIDE</b> <b>Prof. Mahesh P. Patil</b> Ass. Professor R.C. Patel A. Sc. & C. College, Shirpur	 <b>Dr. Ravindra H. Patil</b> Head, Department of Microbiology and Biotechnology
---	--

 <b>Internal Examiner</b>	  <b>External Examiner</b>
---	---



## Industrial Visit





## Industrial Visits at Haffkine Institute, Mumbai



Academic Year	Sr. No.	Method used	Content
2020-21	1.	Project Work	M.Sc. Project List

**Project List M.Sc-II Biotechnology (2020-21)**

Sr. No.	Name of Students	Project Title	Name of Project Guide
1.	Bagad Amruta Dilip	Screening of phytoconstituents from <i>Spillanthes acmella</i> and its antibacterial activity	Dr. L.P. Shirsath
2.	Birhade Pallavi Makkan		
3.	Gurubakshani Mamta Yuvraj		
4.	Koli Jayshree Jagdish		
5.	More Shivani Rajendra	Purification and characterization of bacterial proteases from fungi	Ms. Madhavi Shirsath
6.	Patel Leena Ishwar		
7.	Patil Chetana Ishwar		
8.	Patil Jyotshna Rajendra	Synthesis of zinc nanoparticles and its antibacterial potential	Ms. A. A. Joshi
9.	Patil Divya Vinay		
10.	More Shivani Rajendra		
11.	Patil Harshada Yashwant		
12.	Patil Hemangi Narendra		
13.	Patil Prajaktakumari Omkarbhai	Isolation and characterization of probiotic.	Ms. Jayashri S.pawar
14.	Patil Suvarna Ashok		
15.	Patil Harshada Yashwant		
16.	Patil Hemangi Narendra		
17.	Pawara Nitin Bhika	Screening of phytoconstituents from <i>Ruta graveolans</i> and its antifungal activity	Ms. A. C. Patil
18.	Shirsath Gayatri Mohan		
19.	Shirsath Sheetal Mohan		
20.	Vasave Simran Yogesh		
21.	Pawara Nitin Bhika		



**Dr. S. P. Patil**  
**HOD**

**Dept. of Microbiology & Biotechnology**





**Project List (2020-21) M.Sc-II (Microbiology)**

Sr. No.	Name of Students	Project Title	Name of Project Guide
1.	Birhade Mayuri Vilas	Isolation of endophytic fungi	Dr. R. H. Patil
2.	Chaudhari Karishma Dilip		
3.	Chavan Tejaswini Ramesh		
4.	Deshmukh Aishwarya Pravinsingh		
5.	Gawale Darshana Rohidas	Isolation of dye degrading bacteria	Dr. S.P. Patil
6.	Kapade Priyanka Rajendra		
7.	Koli Sandhya Sudhakar		
8.	Kureshee Shoheb Aashik		
9.	Mali Dhiraj Sanjay	Green synthesis of silver nanoparticles using plant leaf extract	Dr. A. G. Patil
10.	Panchabhai Pratik Sanjay		
11.	Pardeshi Krushna Rajendra		
12.	Patil Harshavi Ravindra		
13.	Patil Rahul Prakash	Isolation and characterization of fructophilic <i>Lactobacillus</i> from different fruits	Mr. M.P. Patil
14.	Patil Sampada Gorakh		
15.	Salunkhe Payal Kishor		
16.	Valavi Ramsing Narsha		
17.	Wadhwa Divyani Laxmandas	Isolation of PGPR organism	Ms. M. R.Patil
18.	Wadile Sagar Sham		
19.	Birhade Mayuri Vilas		



**Dr. S. P. Patil**  
**HOD**  
**Dept. of Microbiology & Biotechnology**



Academic Year 2021-22	Sr. No.	Method used	Content
	1.	Project Work	M. Sc-II

### Project Work

*Production and partial characterization of biosurfactant produced by crude oil degrading bacteria*



**Department of  
MICROBIOLOGY  
AND  
BIOTECHNOLOGY**

Dr. Leena P. Shirsath  
Muzumdar Road, Shirpur, Dist. Dhule, Maharashtra-431101  
Web: www.rcpatelcollege.ac.in

---

### CERTIFICATE

This is to certify that project entitled "Production and Partial Characterization of Biosurfactant Produced by Crude Oil Degrading Bacteria" is the original research work carried out by Ms. Mayuri Kulkarni, Ms. Megha Bhanre, Ms. Pranita Parideshi and Mr. Mitesh Shelake under supervision of Dr. Leena P. Shirsath (Department of Biotechnology) in the partial fulfilment of degree of **Master of Science (Biotechnology)** during the academic year 2021-22 at R. C. Patel A. S. C. College, Shirpur.

The work presented in this dissertation was carried out under my guidance and supervision. The findings reported in this dissertation are not allowed to publish in any Journal/Book without the permission of Research/ Project guide.

Place: Shirpur

Date:

  
 Project Guide

  
 Head of department



External Examiner

  
 Internal Examiner

---

M. Sc. (Biotechnology) Project Dissertation 2021-22 Page 2

## Project Work

Development of microbial consortium for the decolorization of reactive dye Yellow K-101

---



**Department of  
MICROBIOLOGY  
AND  
BIOTECHNOLOGY**

R. C. Patel A. S. C. College,  
Shriper, (Dist. Dahanu, MS)  
Pin-422402 (M.S., INDIA)  
Web: www.rcpatelcollege.org

---

### CERTIFICATE

This is to certify that project entitled "Development of Microbial Consortium for the Decolorization of Reactive Dye Yellow K-101" is the original research work carried out by Mr. Tajar B. Chaudhari, Mr. Mayur R. Patil, Mr. Kiran P. Tamboli, Ms. Nikita D. Randive, Ms. Arati P. Patil and Ms. Dipali D. Patil under supervision of Dr. Sandip P. Patil (Head, Microbiology) as the partial fulfillment of Degree of Master of Science (Microbiology) during the academic year 2021-22 at R. C. Patel A. S. C. College, Shriper.

The work presented in this dissertation was carried out under my guidance and supervision. The findings reported in this dissertation are not allowed to publish in any Journal/Book without the permission of Research guide and the Head of the Department.

Place: Shriper  
Date:



Project Guide





Head of Department



Internal Examiner



Internal Examiner

---

M. Sc. (Microbiology) Project Dissertation 2021-22 Page 2





R. C. Patel Arts, Science and Commerce  
College Shirpur


**Department of Biotechnology**

**CERTIFICATE**


This is to certify that dissertation work entitled “**GREEN SYNTHESIS OF SILVER NANOPARTICLES USING THE LEAF EXTRACT OF *ELAEOCARPUS GANITRUS***” is the original research work carried out by **Mr. Patil Jay, Mr. Sonar Purushottam, Ms. Patil Bhavana, Ms. Bhairav Unnati, Ms. Sonawane Nandini** under the supervision of **Mrs. Amruta Joshi** for the partial fulfillment of the degree of “**Master of Science in Biotechnology**” during the academic year 2021-2022 at R. C. Patel A. S. C. College, Shirpur.

Place: Shirpur

Date:

  
**Mrs. Amruta Joshi**  
Asst. Professor,  
Dept. of Biotechnology  
R. C. Patel, A.S.C. College,  
Shirpur - 425405



  
**Dr. Ravindra H. Patil**  
Head  
Dept. Of Biotechnology  
R. C. Patel, A. S.C. College,  
Shirpur - 425405

  
**INTERNAL EXAMINAR**  
MSc PROJECT DISSERTATION

  
**EXTERNAL EXAMINER**

PAGE 3



R. C. Patel Educational Trust

**R. C. Patel arts, Commerce, Science  
Collage, Shirpur**

Department of Microbiology

**CERTIFICATE**

This is to certify that project entitled “ **ISOLATION OF PHOSPHATE SOLUBILIZING BACTERIA FROM RHIZOSPHERE SOIL**” was carried out in the laboratories of R. C. Patel A. S. C. College, Shirpur. Submitted by Miss. Puja Jayaswal , Miss. Vaibhavi Bachhav, Miss. Bhakti Bagale, Miss. Rituja Patil, Miss. Pooja Pimpale, Miss. Pratiksha Malche, Miss. Chetana Shinde

The work is presented in this dissertation was carried out under my guidance and supervision.

Place:- Shirpur

Date: 18/07/20

Project supervisor

**Dr. Ravindra H. Patil**

Internal examiner

Head Department of Microbiology

**Dr. Sandip R. Patil**

External examiner





**R. C. Patel, Arts, Commerce and  
Science College, Shirpur**  
Department of Biotechnology

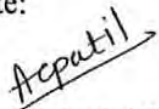
## CERTIFICATE

This is to certify that the project entitled “Biogenic synthesis of Silver Nanoparticles using plant leaf extract of *Cissus quadrangularis*” submitted for partial fulfillment of Degree of “Master of Science in Biotechnology” was carried out in the Department of Biotechnology and Microbiology, R. C. Patel, ACS, College, Shirpur, by Ms. Sakshi Mahajan, Ms. Pradnya Desale, Ms. Karishma Patil, Mr. Ganesh Kadam, Mr. Paresh Chaudhari under the guidance of Mrs. Ashwini Patil.


The work presented in this dissertation was carried out under my guidance and supervision. The investigation described in this report is not allowed to publish in any journal without the permission from Research Guide and Head of Department of Biotechnology, R. C. Patel, ACS, College, Shirpur.

Place: Shirpur

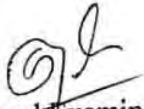
Date:

  
Mrs. Ashwini Patil  
Asst. Professor,  
Dept. Of Biotechnology,  
R. C. Patel, ACS, College,  
Shirpur - 425405



  
Dr. Ravindra H. Patil  
Head,  
Dept. Of Biotechnology  
R. C. Patel, ACS, College,  
Shirpur - 425405

  
Internal Examiner

  
External Examiner



## Project Work



# DEPARTMENT OF MICROBIOLOGY



**CERTIFICATE**

This is to certify that project entitled "Green synthesis of silver nanoparticles using *Butea Monosperma* plant extract: In vitro characterizations and antibacterial activity", submitted for partial fulfilment of degree of "Master of Science in Microbiology" were carried out in the Department of microbiology, R.C. Patel A.C.S. College, Shirpur, **By Mr. Saurabh Marathe, Miss. Ashwini Sonawane, Miss. Amrapali Wagh, Miss. Hemangi Patil, Miss. Riya Godhawani, Mr. Sandeep Patil, Miss. Nisha Rajput**, This work was carried out during the academic year 2021-22 under the supervision of **Dr. Ashwini G. Patil** (Asst. Professor, Microbiology).

The work presented in this dissertation was carried out under my guidance and supervision. The investigation described in this report is not allowed to publish in any journal without the permission from research guide/head department of microbiology,  
R. C. Patel A. C. S. College, Shirpur.

**Place:** Shirpur  
**Date:**



**Dr. Ashwini G. Patil**  
(Project Guide)





**Head**  
Dept. of Microbiology



**Internal Examiner**



**External Examiner**

**Project List (2021-22) M. Sc-II (Microbiology)**

Sr. No.	Name of Students	Project Title	Name of Project Guide
1.	Chaudhari Tejas Baburao Bachhav	Development of Microbial Consortium for the decolorization of Reactive Dye Yellow K-HL	Dr. S. P. Patil
2.	Patil Arati Pramod		
3.	Patil Mayur Ramkrushna		
4.	Tamboli kiran prakash		
5.	Patil Dipali Dhanraj		
6.	Randive Nikita Devidas		
7.	Bagale Bhakti Dilip		
8.	Vaibhavi Chandrakant Bacchav		
9.	Malache Pratiksha Bhimsing		
10.	Pimpale Pooja mukundrao		
11.	Patil Rituja Bhalchandra		
12.	Shinde Chetanaben Dnyaneshwar		
13.	Jayaswal Puja Narendra	Green Synthesis of Silver Nanoparticles using <i>Butea Monosperma</i> plant extract: In vitro characterization and antibacterial activity	Dr. A.G.Patil
14.	Sonawane Ashwini Rajendra		
15.	Marathe Saurabh Eknath		
16.	Wagh Amrapali soma		
17.	Godhwani Riya Balram		
18.	Patil Sandeep Prakash		
19.	Patil Hemangi Prabhakar		
20.	Rajput Nisha bhatusing		
21.	Jayaswal Puja Narendra		
22.	Vispute Vaibhav Ramkrishna	Isolation of endophytic fungi from indigenous medicinal plants	Dr. M. R. Patil
23.	Girase Sapana Lalsing		
24.	Patil Purna sanjiv		
25.	Pawar Ritika ashok		
26.	Chelani Kajal Sanjay		
27.	Khopade Darshana Ashok		
29.	Shirsath Ankita Rajendra	Isolation, identification and potential probiotic characterization of fructophilic lactic acid bacteria	Dr. M.P. Patil
30.	Pawar Prajwal somnath		
31.	Dorik Prashant Dnyaneshwar		
32.	Wagh Megha Udesh		
33.	Chaudhari Nayana Sunil		
34.	Mali Pranil Suryakant		
35.	Patil Mahima Sanjay		



**Dr. S. P. Patil**  
**HOD**  
**Dept. of Microbiology & Biotechnology**



**Project List M.Sc.-II (Biotechnology)**

Sr. No.	Students Name	Project Title	Name of Project Guide
1.	Kulkarni Mayuri Mahendra	Production and partial characterization of biosurfactant produced by crude oil degrading bacteria	Dr. L.P. Shirsath
2.	Bhamre Megha Umesh		
3.	Pardeshi Pranita Surendra		
4.	Shedake Mitesh Arjaun		
5.	Bidkar Ajinkya Harendra	Green synthesis of silver nanoparticles using plant root tuber	Dr. J.S. Patil
6.	Patil Ruchita Himmat		
7.	Patil Jayshree Rajendra		
8.	Patil Jay Eknath	Green synthesis of silver nanoparticles using leaf extract.	Ms. A. A. Joshi
9.	Sonawane Nandini Ravindra		
10.	Bhairav Unnati Sunil		
11.	Sonar Purshottam Somnath		
12.	Patil Bhavana Valmik		
13.	Mange Snehlata Suresh	Isolation & characterization of potash solubilizing bacteria.	Ms. H. D. Pardeshi
14.	Harsola Kruti Bharat		
15.	Raheja Palak Prakashkumar		
16.	Wadile Rajshri Kashinath	Biogenic synthesis of silver nanoparticles using plant extract.	Ms. A. C. Patil
17.	Mahajan Sakshi Dhananjay		
18.	Chaudhari Paresh Manoj		
19.	Desale Pradnya Jayvant		
20.	Kadam Ganesh Dattu		
21.	Patil Karishma Nitin		

*S. P. Patil*

**Dr. S. P. Patil**

**HOD**

**Dept. of Microbiology & Biotechnology**






Academic Year 2022-23	Sr. No.	Method used	Content
	1.	Project Work	M.Sc-II
2.	Industrial Visits	T.Y.B.Sc	

### Project Work

*Isolation and characterization of probiotic yeast from flowers of Mangifera indica*



Department of  
**BIOTECHNOLOGY**  
AND  
**MICROBIOLOGY**

Dr. V. Patil A. S. C. College  
Shirpur, Dist. Dhule, MS  
425 105 (INDIA)  
www.rcpet.ac.in

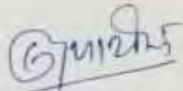
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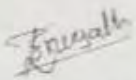
**CERTIFICATE**

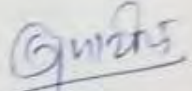
This is to certify that project entitled "*Isolation and characterization of probiotic yeast from flowers of Mangifera indica*" is the original research work carried out by Mr. Chetan M. Patil, Mr. Mahesh R. Pawar, Mr. Prashant P. Kulthe, Mr. Sachin N. Wagh, Mr. Rohit D. Mahale, Mr. Kunal V. Gujar, Mr. Amol N. Girase, Mr. Pankaj R. Jadhav under supervision of Dr. Sandip P. Patil (Project Guide) and Dr. Leena P. Shirsath (Project Co-Guide) in the partial fulfillment for the degree of **Master of Science (Biotechnology)** during the academic year 2022-23 at R. C. Patel A. S. C. College, Shirpur.

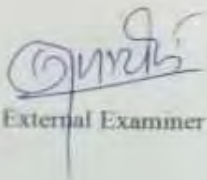
The work presented in this dissertation was carried out under my guidance and supervision. The findings reported in this dissertation are not allowed to publish in any Journal/Book without the permission of Research guide and the Head of the Department.


Place: Shirpur  
Date: 7-6-2023

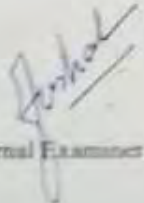
  
Project Guide

  
Project Co-Guide

  
Head of Department

  
External Examiner




  
Internal Examiner

---

Project Dissertation (M.Sc.) Biotechnology 1 | Page

## Project Work

Optimization of Acid Dye Decolorization by Microbial Consortium for the Management of Textile Waste Water

 Department of  
**MICROBIOLOGY**  
AND  
**BIOTECHNOLOGY**

R. C. Patel A. S. C. College,  
Shirur, Dist-Umberga, MS,  
Pin-431005-200450000  
Web: www.rcpet.ac.in

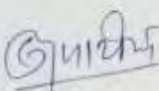
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**CERTIFICATE**

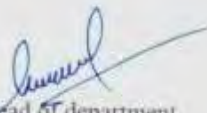
This is to certify that project entitled "Optimization of Acid Dye Decolorization by Microbial Consortium for the Management of Textile Waste Water" is the original research work carried out by Ms. Janhavi J. Patil, Mr. Manish S. Jadhav, Mr. Mangesh G. Hajare, Ms. Kshatija S. Valvi, Ms. Sonali R. Mali, Mr. Manoj S. Pawara and Mr. Indrasing V. Vasave under the supervision of Dr. Sandip P. Patil (Project Guide) and Ms. Harsha D. Parateshi (Project Co-Guide) in the partial fulfilment of degree of **Master of Science (Microbiology)** during the academic year **2022-23** at R. C. Patel A. S. C. College, Shirpur.

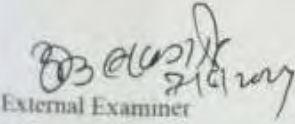
The work presented in this dissertation was carried out under my guidance and supervision. The findings reported in this dissertation are not allowed to publish in any Journal/Book without the permission of Research/ Project guide and Co-Guide.

Place: Shirpur  
Date: 07/06/2023


  
Project Guide

  
Project Co-Guide

  
Head of Department

  
External Examiner


  
Internal Examiner



---

M. Sc (Microbiology) Project Dissertation 2022-23 2 | Page

## Project Work

	<b>Department of MICROBIOLOGY AND BIOTECHNOLOGY</b>	R. C. Patel A.C.S.College, Shirpur, (Dist-Dhule), MS Tel. (02563)-299323(Off ) Web: www.mbbtshirpur.in
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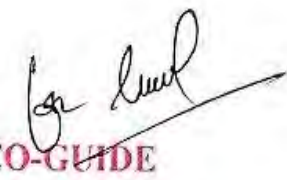
  

### CERTIFICATE

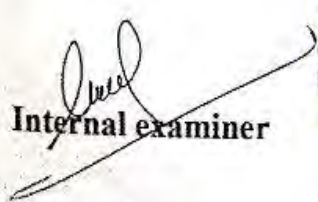

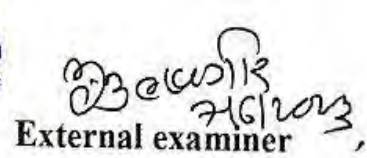
This is to certify that project entitled "ISOLATION OF ENDOPHYTIC FUNGI FROM ETHNO MEDICINAL PLANTS AND THEIR BIOLOGICAL ACTIVITY<sub>2</sub>" is the original research work carried out by **Mr. Parag K. Ahirrao, Miss. Neha R. Mali, Miss. Yogita S. Dorik, Miss. Bhagyashree K. Khairnar, Miss. Shital N. Jadhav, Miss. Kiran A. Behere, Mr. Sumit S. Patil** under supervision of **Dr. Ravindra H. Patil** (Head, Microbiology) in the partial fulfilment of degree of **Master of Science (Microbiology)** during the academic year 2022-23 at R. C. Patel A. S. C. College, Shirpur.

The work presented in this dissertation was carried out under my guidance and supervision. The findings reported in this dissertation are not allowed to publish in any journal/Book without the permission of research guide and the Head of the Department.

Place : - Shirpur  
Date : -

 <b>GUIDE</b> <b>Dr. Ravindra H. Patil</b> Head, Department of Microbiology	 <b>CO-GUIDE</b> <b>Dr. Mohini R. Patil</b> Assistant Professor Department of Microbiology
---	--

 <b>Internal examiner</b>		 <b>External examiner</b>
---	---	--



## Project Work

**" Isolation of plant growth promoting organism and study on their applications as biofertilizer"**


 R.C.PATEL EDUCATIONAL TRUST *****	DEPARTMENT OF	R.C. PATEL A. C. S. COLLEGE
	MICROBIOLOGY	SHIRPUR,(DIST-DHULE),MS
	AND	TEL: (02563)-299328(OFF.)
	BIOTECHNOLOGY	WEB: www.mbbtshirpur.i

**CERTIFICATE**

This is to certify that project entitled " Isolation of plant growth promoting organism and study on their applications as biofertilizer" is the original research work carried out by Ms. Hemakshi Vadnere, Ms. Dipika Khairnar, Ms. Kamini Chaudhari, Ms. Smita Deore, Ms. Pradnya Rajput, Mr. Akshay Sonawane, Mr. Pushkaraj Salunkhe under supervision of Dr. Mohini R. Patil (Department Of Microbiology) in the partial fulfillment of degree of **Master Of Science (Microbiology)** during the academic year 2022-2023 at R.C. Patel A. S. C. College, Shirpur.

The work presented in this dissertation was carried out under my guidance and supervision. The findings reported in this dissertation are not allowed to publish in any Journal/Book without the permission of Research/Project guide.

Place: Shirpur  
Date: 07/06/2023

 Project Guide	 Head of department
 External Examiner	 Internal Examiner



## Project Work



### DEPARTMENT OF BIOTECHNOLOGY



#### CERTIFICATE

This is to certify that the project entitled "Isolation, Identification, and Potential Probiotic Characterization on of fructophilic lactic acid bacteria from fructophilic niches", submitted for partial fulfillment of the degree of "Master of Science in Biotechnology" were carried out in the Department of Biotechnology, R.C. Patel A.C.S. College Shirpur. By Mr. Mayur Patil, Mr. Rahul Nikam, Ms. Nikita Patil, Ms. Tejasvini Deore, Mr. Akash Pawar, Ms. Mona Bhamre, Ms. Mayuri Tolkar, Ms. Jayshree Patil. This work was carried out during the academic year 2022-23 under the supervision of Dr. Mahesh P. Patil (Asst. Professor. Microbiology).

The work presented in this dissertation was carried out under my guidance and supervision. The investigation described in this report is not allowed to publish in any journal without permission from the Research Guide/Head Department of Biotechnology, R. C. Patel A. C. S. College Shirpur.

Place: Shirpur

Date : 07/06/2023

Dr. Mahesh p. Patil  
(Project Guide)

Head  
Dept. of Biotechnology

Internal Examiner



External Examiner

## Project Work

Production, Partial Characterization and Applications of Bioactive Compound from Microbial Origin



**Department of  
MICROBIOLOGY  
AND  
BIOTECHNOLOGY**

R. C. Patel A.C.S.College,  
Shirpur, (Dist-Dhule), MS  
Tel: (02563)-299328(Off.)  
Web: [www.mbbtshirpur.in](http://www.mbbtshirpur.in)

### CERTIFICATE

This is to certify that project entitled “**Production, Partial Characterization and Applications of Bioactive Compound from Microbial Origin**” is the original research work carried out by Ms. Sneha D. Sonawane, Ms. Jayashree G. Patil, Mr. Prashant M. Rajput, Ms. Kalyani R. Sonawane, Ms. Kajal H. Borse, Mr. Hritik S. Girase, Mr. Sachin P. Harankar under supervision of **Dr. Sandip P. Patil** (Project Guide) and **Ms. Varsha D. Jayaswal** (Project Co-Guide) in the partial fulfilment of degree of **Master of Science (Microbiology)** during the academic year 2022-23 at R. C. Patel A. S. C. College, Shirpur.

The work presented in this dissertation was carried out under my guidance and supervision. The findings reported in this dissertation are not allowed to publish in any Journal/Book without the permission of Research/ Project guide and Co-Guide.

Place: Shirpur

Date: 07-06-2023.

Project Guide

Project Co-Guide

Head of department

External Examiner



Internal Examiner



## Project Work

*Green synthesis of silver nanoparticles using flower extract of *Tridax procumbens*. In vitro characterization and antibacterial activity*

Department of  
Biotechnology  
And  
Microbiology

R.C. Patel A.C.S. College,  
Shirpur, (Dist-Dhule), MS  
Tel: (025613)-299328(OIE)  
Web: www.rablshirpur.in

---

**CERTIFICATE**

This is to certify that the project entitled "Green synthesis of silver nanoparticles using flower extract of *Tridax procumbens*: In vitro characterization and antibacterial activity, submitted for partial fulfillment of the degree of "Master of Science in Biotechnology" were carried out in the Department of Biotechnology, R.C. Patel A.C.S. College, Shirpur, By. Mr. Ketan R. Bornare, Mr. Jagdish Y. Patil, Mr. Dipak S. Jadhav, Ms. Jagruti A. Mali, Mr. Rohit S. Ahire, Ms. Yashshshri S. More, Ms. Roshni Y. Pawar, Ms. Tejaswini S. Nikam

This work was carried out during the academic year 2022-23 under the supervision of Dr. Ashwini G. Patil (Asst. Professor, Microbiology).

The work presented in this dissertation was carried out under my guidance and supervision. The investigation described in this report is not allowed to publish in any journal without the permission from research guide/head department of Biotechnology,  
R. C. Patel A. C. S. College, Shirpur.

Place: Shirpur  
Date:

  
05/06/23  
Dr. Ashwini G. Patil  
(Project Guide)

  
HEAD  
Department of Biotechnology

  
Internal Examiner  
M.Sc (Biotechnology) Project Dissertation 2022-23

  
External Examiner

Page 2

Project Work

R. C. Patel Arts, Science and Commerce College

Shirpur

Department of Microbiology

**CERTIFICATE**

This is to certify that dissertation work entitled "GREEN SYNTHESIS OF ZINC NANOPARTICLES USING FUNGI" is the original research work carried out by Ms. Chaudhari Yamini, Mr. Amol Mohite, Mr. Rohit Magare, Mr. Sujay Wadile, Ms. Kajal Chambhar, Ms. Harshal Chambhar under the supervision of Mrs. Amruta Joshi for the partial fulfilment of the degree of "Master of Science in Microbiology" during the academic year 2022-2023 at R. C. Patel, A. S. C. College, Shirpur.

Place: Shirpur

Date:



Ms. Amruta Joshi,

Asst. Professor,

Dept. Of Microbiology,

R.C. Patel, A.S.C.

College, Shirpur.




Dr. R.H. Patil,

Head,

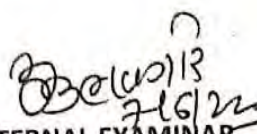
Dept. Of Microbiology,

R.C. Patel, A.S.C.

College, Shirpur.



INTERNAL EXAMINAR



EXTERNAL EXAMINAR

**Project List (2022-23) M.Sc-II (Microbiology)**

Sr. No.	Name of Students	Project Title	Name of Project Guide
1.	Patil Jayashri Gulabrao	Production, Partial characterization & Applications of bioactive compounds	Dr. S. P. Patil
2.	Kajal Borse Hiralal		
3.	Sonawane Kalyani Ranjit		
4.	Girase Hritik Sattarsing		
5.	Rajput Prashant Meghrajasing		
6.	Harankar Sachin Pramod		
7.	Sonawane Sneha Dilip		
8.	Dorik Yogita Shivaji	Isolation of Endophytic Fungi from Ethno Medicinal Plants & their Biological activities	Dr. R. H. Patil
9.	Jadhav Shital Natthusing		
10.	Mali Neha Ramesh		
11.	Patil Sumit Suresh		
12.	Behere Kiran Anil		
13.	Ahirrao Parag Kailas		
14.	Khairnar Bhagyashri Kishor		
15.	Rajput Pradnya Rajendra	Isolation of Plant Growth Promoting Organism & Study of their application as Biofertilizer	Dr. M. R. Patil
16.	Smita Deore Jitendra		
17.	i VadnereHemakshi Rajesh		
18.	Chaudhari Kamini Dnyeshwar		
19.	Sonawane Akshay Jagatrao		
20.	Khairnar Dipika Ravindra		
21.	Salunkhe Pushkraj Dilip		
22.	Patil Janhavi Jagdish	Optimization of Azo dye decolorization by Microbial Consortium	Ms. H. D. Pardeshi
23.	Hajare Mangesh Ganesh		
24.	Valvi Kshitija Sakharam		
25.	Mali Sonali Ram		
26.	Pawara Manoj Sakharam		
27.	Indrasing Vasave Vansing		
28.	Jadhav Manish Satish		
29.	Chaudhari Yamini Sambhaji	Green Synthesis of Zinc nanoparticles using Fungi	Ms. A. A. Joshi
30.	Magare Rohit Dagulal		
31.	Mohite Amol Tukaram		
32.	Wadile Sujay Prakash		
33.	Sonar Harshal Narendra		
34.	Chambhar Kajal Prakash		



**Dr. S. P. Patil**

**HOD**

**Dept. of Microbiology & Biotechnology**





**Project List (2022-23) M.Sc-II (Biotechnology)**

Sr. No.	Students Name	Project Title	Name of Project Guide
1.	Gujar Kunal Vijay	Isolation & Characterization of Probiotic Yeast from leaves of <i>Magnifera Indica</i>	Dr. L. P. Shirsath
2.	Patil Chetan Motising		
3.	Kulthe Prashant Prabhakar		
4.	Wagh Sachin Nanabhau		
5.	Mahale Rohit Dattatray		
6.	Pawar Mahesh Ramesh		
7.	Jadhav Pankaj sukhilal		
8.	Girase Amol Nathesing		
9.	Deore Tejaswini Sharadchandra	Isolation, Identification & potential probiotic characterization of fructophilic lactic acid bacteria from fructophilic niches Isolation of Plant Growth Promoting Organism & Study of their application as Biofertilizer	Dr. M. P. Patil
10.	Patil Nikita Bharat		
11.	Talokar Mayuri Roshan		
12.	Nikam Rahul Arvind		
13.	Bhamre Mona Ramsing		
14.	Nikam Tejaswini Sunil		
15.	Patil Jayashri Ashok		
16.	Pawar Akash Mangilal		
17.	Jadhav Dipak Sukhlal	Synthesis of Silver nanoparticles using <i>Tridare procumber</i> flower	Dr. A. G. Patil
18.	Patil Jagdish Yuvraj		
19.	Bornare Ketan Rajesh		
20.	Patil Mayur Sambhaji		
21.	Ahire Rohit Samadhan		
22.	More Yashashree Shantaram		
23.	Pawar Roshni Yashwant		
24.	Mali Jagruti Arjun		
25.	Girase Dipali Ankush	Isolation & Screening of Phytopathogenic Fungi causing Wilt Disease of Banana Plant	Mr. S. V. Yadav
26.	Patale Kalpesha Vasudev		
27.	Rawal Nikita Rampalsing		
28.	Patil Akash Tukaram		
29.	Marathe Mohit Ganesh		
30.	Bawa Kalyani Nareshgir		
31.	Patil Nitin Mahendra		



**Dr. S. P. Patil**

**HOD**

**Dept. of Microbiology & Biotechnology**



## Practical Demonstration at Microbiology & Biotechnology Lab





## Practical Demonstration at Microbiology & Biotechnology Lab





## Practical Demonstration at Microbiology & Biotechnology Lab



**Industrial Visits at Jain farm and fresh foods Ltd., Jalgaon**





**Industrial Visits at Jain farm and fresh foods Ltd., Jalgaon**





## Participative Learning

Academic Year	Sr. No.	Method used	Content
2019-20	1.	Poster Presentations	B.Sc, M.Sc

### Poster Presentations on Disease awareness



**PPT presentation**



Academic Year	Sr. No.	Method used	Content
2020-21	1.	Poster Presentations	M. Sc, B.SC

**Poster Presentations on disease awareness**





Academic Year 2021-22	Sr. No.	Method used	Content
	1.	Poster Presentations	Disease Awareness
	2.	Group Discussion	Personal Hygiene

### Poster Presentations on Disease awareness



### Group Discussion





Academic Year 2022-23	Sr. No.	Method used	Content
	1.	Group Discussion	M.sc
	2.	Poster Presentations	B.Sc, M. Sc

### Group Discussion



### Poster presentation





## PPT Presentation



## Panel Discussion -S. Y. B.Sc Syllabus restructuring workshop

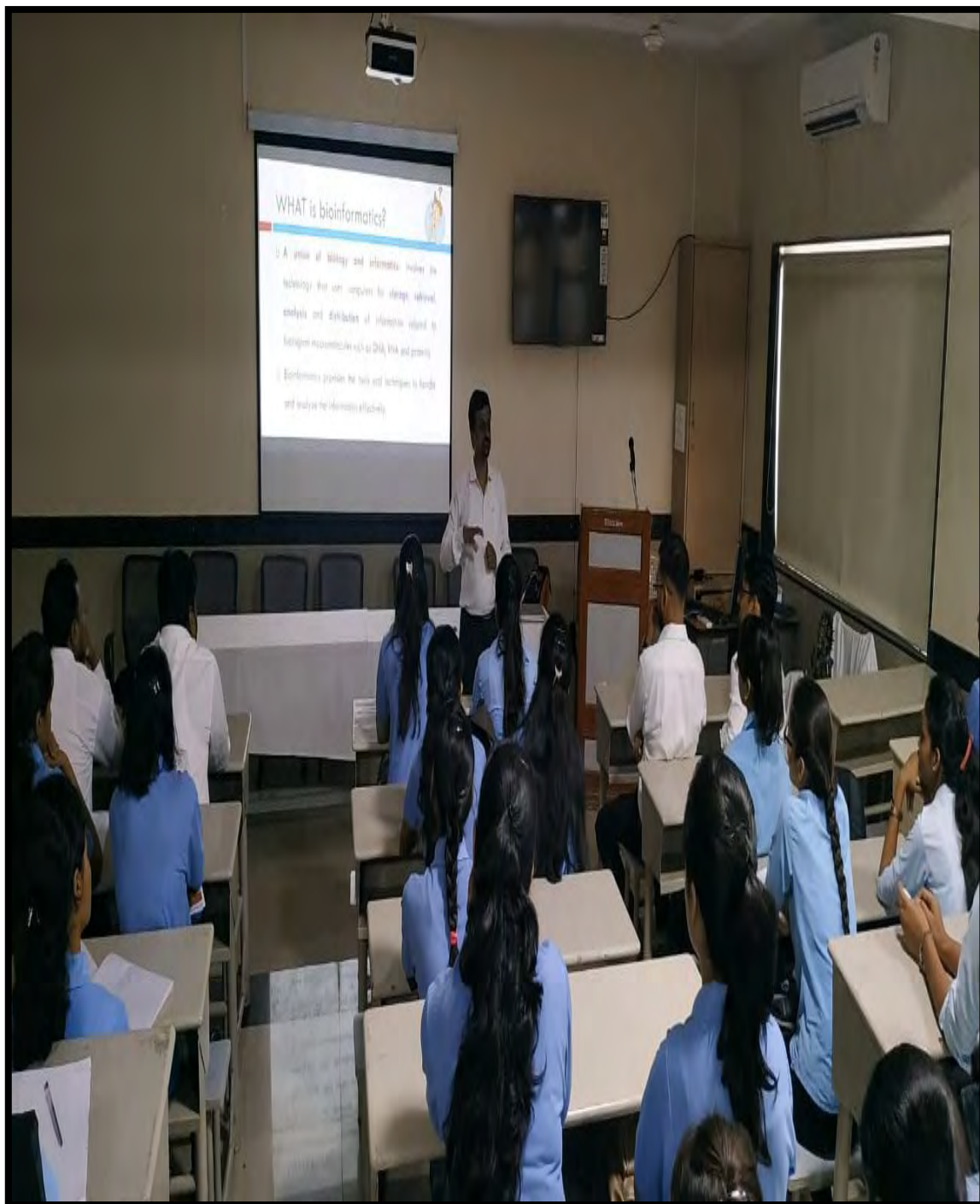




## Problem Solving

Academic Year	Sr. No.	Method used	Content
2018-19	1.	Expert Talk	Bioinformatics

Expert talk by Prof. Kamlesh Kurankar sir on Bioinformatics



Academic Year 2020-21	Sr. No.	Method used	Content
	1.	Expert Talk	How to write a Scientific Research article

### Expert Talk by Dr. Ulhas K.Patil sir on How to Write a Scientific Research article

The image shows a screenshot of a PowerPoint presentation. The slide is titled "Achieving creativity" and contains the following text:

**Thought** is a matter of having some worthwhile **results and ideas to publish** and you need to be able to interpret them correctly.

**Structure** is simply a matter of getting the **right things in the right place**.

**Style** is a matter of choosing the **fewest and most appropriate words** and using the **rules of good grammar**.

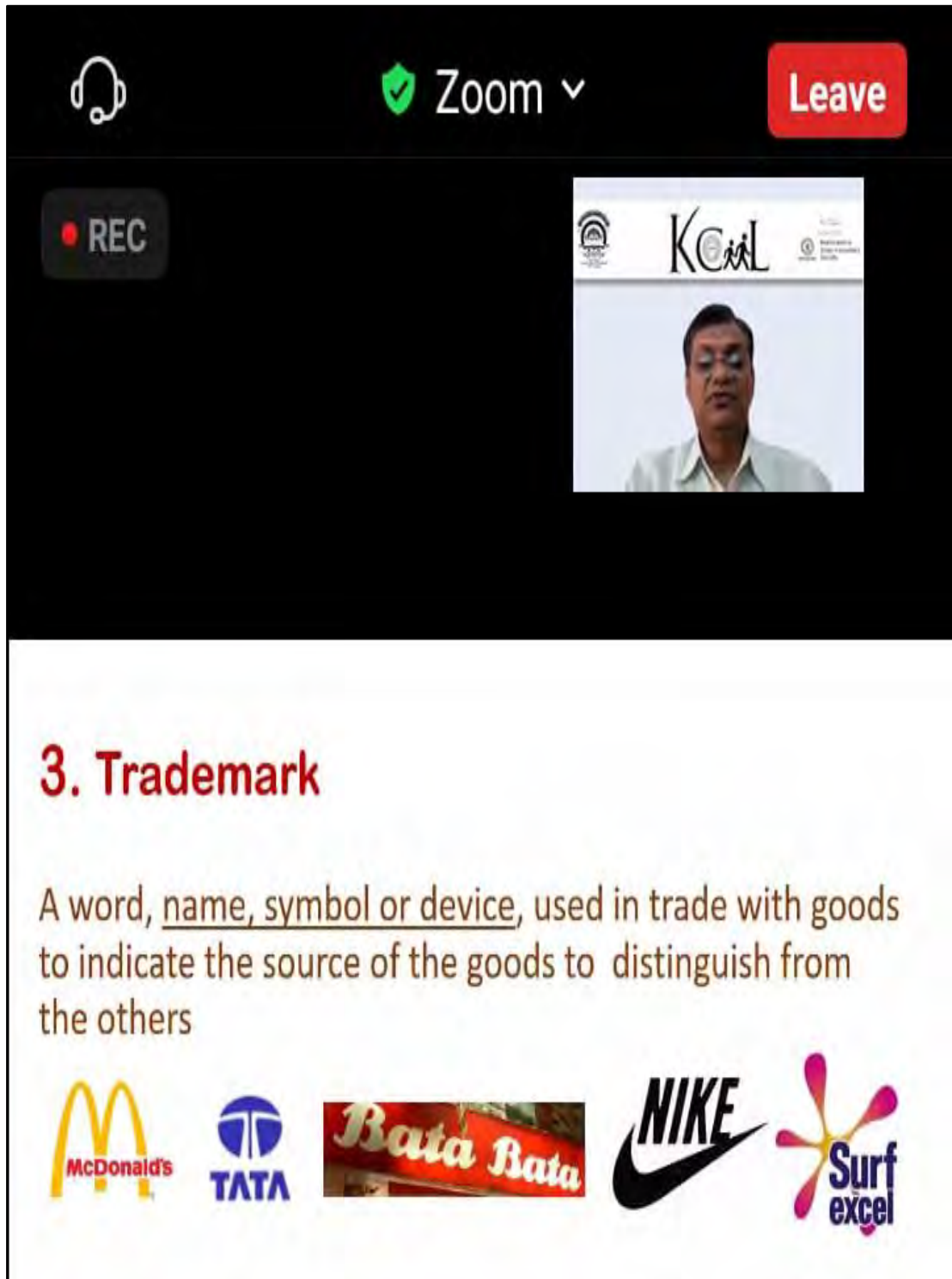
*You should allow yourself to get into a **writing mood**.  
Finish the background reading, the review of the literature, and the work to date. You know it inside out.  
Relax. Take deep breaths. Just let it flow. Many people find music a help but choose carefully ... Wear comfortable clothes; a sweater and jeans are fine.*

*Anthony David*

The slide is part of a presentation with a slide bar on the left showing slides 7, 8, 9, 10, and 11. The top of the screen shows the Microsoft PowerPoint ribbon with tabs for Insert, Draw, Design, Transitions, Animations, Slide Show, Record, Review, View, and Help. A small video inset in the top right corner shows a man in a brown sweater and glasses, likely Dr. Ulhas K. Patil, speaking. The bottom of the screen shows the status bar with "Slide 9 of 52", "English (India)", "Accessibility: Investigate", "Notes", "Comments", and a zoom level of "85%".

Academic Year	Sr. No.	Method used	Content
2021-22	1.	Expert Talk	Entrepreneurship

Expert talk by Dr. Bhushan L. Chaudhari ( KBCNMU, Jalgaon ) sir on Entrepreneurship



Zoom interface showing a meeting with a 'Leave' button and a 'REC' indicator. The main content is a slide titled '3. Trademark'.

**3. Trademark**

A word, name, symbol or device, used in trade with goods to indicate the source of the goods to distinguish from the others

Logos shown: McDonald's, TATA, Bata Bata, NIKE, Surf excel



Academic Year	Sr. No.	Method used	Content
2022-23	1.	Expert Talk	Research methodology & IPR

**Expert Talk by Dr. Bhushan L. Chaudhari ( KBCNMU, Jalgaon ) sir on IPR**



**Expert Talk by Dr. Bhushan L. Chaudhari (KBCNMU, Jalgaon) sir on Research methodology & IPR**



**R. C. Patel Educational Trust's**  
**R. C. Patel Arts, Commerce and Science College Shirpur**  
**Department of Microbiology & Biotechnology**  
**The Details of ICT Pedagogy used in Teaching Learning Process**  
**For the academic year 2018-19**

Sr. No.	Contents	Type of ICTMaterial	Source	Links
1.	T.Y.Bsc (MB)	Audio Lecture	Drive	Zoom Meeting ID 883 3700 2806
2.	M.sc-II (MB) M.sc-II (BT)	Video Lecture	Drive	Zoom Meeting ID 811 7351 2077 832 3796 1058
3.	M.Sc- II(MB)  M. Sc-I (MB)	Test using Google form or Testmoz	Drive	<a href="https://docs.google.com/forms/d/1-Ioe-K9BEhqo0o9KKD2XMLIbcLgWdZz_kaqA71gL4Hw/edit?usp=sharing">https://docs.google.com/forms/d/1-Ioe-K9BEhqo0o9KKD2XMLIbcLgWdZz_kaqA71gL4Hw/edit?usp=sharing</a>  <a href="https://docs.google.com/forms/d/1SRtZcqmFcs56j_Wb0cJdoDm3f2Ycyb8p65u5xfD30I0/edit">https://docs.google.com/forms/d/1SRtZcqmFcs56j_Wb0cJdoDm3f2Ycyb8p65u5xfD30I0/edit</a>





Hi Varsha Jayaswal,

Gaurav ramesh More has joined your meeting:

Topic **Varsha Jayaswal's Zoom Meeting**

Meeting ID **777 3814 4230**

Time **Apr 7, 2021 12:00 PM Mumbai, Kolkata, New Delhi**

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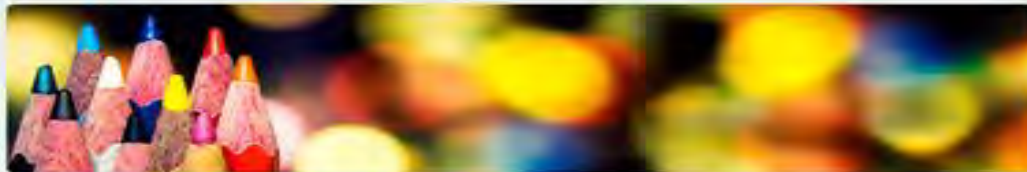
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## Internal Examination\_TYBSc\_MB-503: Metabolism

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### Internal Examination\_TYBSc\_MB-503: Metabolism

**B**   *I*   U

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Short answer text

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[Questions](#)   [Responses](#) **97**   [Settings](#)
Total points: 40



### Internal Exam\_MB-102\_MSc-I

**B**   *I*   U

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**Your Name (Surname first) \***

Short answer text

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1. Which of the following macromolecule does not exist in polymer form? \*

Protein

