



**INSTITUTIONAL ANNUAL REPORT: 2023-24**  
DHARAMPETH EDUCATION SOCIETY'S  
DHARAMPETH M. P. DEO MEMORIAL SCIENCE COLLEGE, NAGPUR

## VISION:

To develop talent through quality and affordable education.

To produce thriving, determined and vibrant population of youngsters well equipped to move into the knowledge society.

To prepare students for wide spectrum of positions and profits in various fields.

## MISSION:

To nurture the obvious and identify the unseen and undiscovered talents of the students so as to turn them towards the success path.

To give more than the curriculum so as to enrich the academic experience of the learners.

To provide an ambience which will help the students to keep their focus on studies and build relationship with their peers.

## AFFILIATED TO RTM NAGPUR UNIVERSITY, NAGPUR

### ADDRESS & CONTACT DETAILS:

North Ambazari Road, Near Ambazari Lake, Nagpur- 440033 (MS), India; Tel.: +91 712- 2241372, 2241490

### WEBLINKS:

[www.dharampethscience.com](http://www.dharampethscience.com)

[principal\\_dsc@rediffmail.com](mailto:principal_dsc@rediffmail.com)

## EDUCATION:

### DEGREE COURSES:

B. Sc. Science (Physics, Maths, Chemistry, Statistics, Electronics, Computer Sciences, Languages)

B. Sc. Science (Chemistry, Botany, Zoology, Microbiology)

B. Sc. Science (Home Science)

### CERTIFICATE & DIPLOMA COURSES:

Bioinformatics (COC)

IIT Spoken Tutorials (Seven Certificate Courses)

Life-long learning & Extension, RTM Nagpur University, Nagpur's under Jeewan Shikshan Abhiyan (Ten Short-term Certificate Courses)

### POST GRADUATE COURSE:

M. Sc. Mathematics

M. Sc. Chemistry

## LEADERSHIP:

**DR. AKHILESH V. PESHWE**, Principal

**Dr. N.P. Gaikwad**, IQAC Co-ordinator

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**Dharampeth Education Society's**  
**DHARAMPETH M. P. DEO MEMORIAL SCIENCE COLLEGE,**  
**NAGPUR**  
**Institutional Annual Report: 2023-24**

❖ **About the College:**

Dharampeth M. P. Deo Memorial Science College, Nagpur, established in 1968 is a generic name, for 'Excellence in Education'. The educational institute has had the rich heritage and has witnessed a steady progress since its inception.

The college is situated away from the hustle and bustle of the city against the backdrop of a beautiful landscape blanketed in green 'Ambazari Lake'. The college campus offers a peaceful & serene atmosphere conducive to study.

The institute is spread over a large expanse of land with beautiful natural atmosphere. It has exceptional infrastructural facilities ranging from congenial ambience of premises to well-equipped laboratories, classrooms, gymnasium, etc.

The college is blessed with learned and committed teaching staff who not only strive hard to evolve and initiate innovative approaches to share knowledge and expertise in various fields of higher education but also kindle creativity and innovations in the students.

The college is affiliated to *Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur* and comes under the purview of 2f/12B of UGC Act 1956.

The college is also reaccredited by NAAC and awarded 'A' grade with **CGPA 3.05**.

❖ **Courses Offered:**

1. Grant in Aid Courses (UG/PG)				
Sr. No.	Name of Course	UG	PG	Pattern
i	Physics	✓	-	Semester
ii	Mathematics	✓	-	Semester
iii	Chemistry	✓	-	Semester
iv	Statistics	✓	-	Semester
v	Electronics	✓	-	Semester
vi	Botany	✓	-	Semester
vii	Zoology	✓	-	Semester
viii	Microbiology	✓	-	Semester
ix	English/Marathi/Hindi, Sansk.	✓	-	Semester
x	Home Science	✓	-	Semester

<b>2. Self-Financing Courses (UG/PG)</b>				
<b>Sr. No.</b>	<b>Name of Course</b>	<b>UG</b>	<b>PG</b>	<b>Pattern</b>
i.	Computer Science	✓	-	Semester
ii.	Mathematics	-	✓	Semester & CBCS
iii.	Chemistry	-	✓	Semester & CBCS
<b>3. Self-Financing Courses (Certificate/ Diploma)</b>				
<b>Sr. No.</b>	<b>Name of Course</b>	<b>Certificate</b>	<b>Diploma</b>	<b>Affiliation</b>
i.	Bioinformatics (COC)	✓	✓	UGC's COC
ii.	Mushroom Cultivation	-	✓	UGC
iii.	Introduction to Computers	✓	-	IIT Bombay
iv.	C and CPP	✓	-	IIT Bombay
v.	Arduino	✓	-	IIT Bombay
vi.	Php and MySQL	✓	-	IIT Bombay
vii.	Inkscape	✓	-	IIT Bombay
viii.	Libreoffice Suit [Base]	✓	-	IIT Bombay
ix.	RDBMS	✓	-	IIT Bombay
x.	Bio-Python	✓	-	IIT Bombay
xi.	HTML	✓	-	IIT Bombay
xii.	PI01Basics of Process Instrumentation	✓	-	VRJSCOE, VNIT, NAGPUR
xiii.	Reverse Engineering [3D Scanning and 3D Inspection –Advanced]	✓	-	VRJSCOE, VNIT, NAGPUR
xiv.	CNC Programming Advanced	✓	-	VRJSCOE, VNIT, NAGPUR
xv.	(IoT) Components & Programming	✓	-	VRJSCOE, VNIT, NAGPUR
xvi.	Mechatronics: Basics of Mechatronics	✓	-	VRJSCOE, VNIT, NAGPUR
xvii.	Industrial Robotics Advanced_ ROBO-2	✓	-	VRJSCOE, VNIT, NAGPUR
xviii.	Vedic Mathematics	✓	-	RTMNU, Nagpur
xix.	Fresh Water Fish Culture	✓	-	RTMNU, Nagpur
xx.	IoT Devices	✓	-	RTMNU, Nagpur
xxi.	Excel for Banking and Accounts	✓	-	RTMNU, Nagpur

xxii.	Fundamental of Event Management	✓	-	RTMNU, Nagpur
xxiii.	Introduction to Forensic Science	✓	-	RTMNU, Nagpur

**Department of Botany  
Annual Report (2023-24)**

1. **Name of the department** : Botany
2. **Year of Establishment** : 1970
3. **Names of Programmes / Courses offered** : **Certificates Course/s: Nil**  
(Certificate, UG, PG, M.Phil., Ph.D., **Diploma Course: 01**  
**Integrated Masters; Integrated Ph.D., etc.)** **UG: B. Sc.**  
**PG: Nil**
4. **Names of Interdisciplinary courses and the departments/units involved**
  - i) Chemistry Botany Zoology (CBZ)
  - ii) Chemistry Botany Microbiology (CBM)
  - iii) Ecology and environment for B. Sc. (Home Science), Sem.-I & II
5. **Names of Certificate Courses if any:** Nil  
**Name of Diploma Course if any:** Diploma in Mushroom Cultivation (COC)
6. **Collaborations / MoUs if any:** Nil
7. **Programme wise Annual/ semester/choice-based credit system:**

Sr. No.	Name of the Courses	Annual	Semester	CBCS
1.	B. Sc	-	Yes	-
2.	M. Sc.	-	-	-
3.	Certificate Courses	-	-	-

**8. Number of Teaching posts:**

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	Professor	-	-
2.	Associate Professor	-	-
3.	Assistant Professor	04	01

**9. Teaching Faculty:**

Sr. No.	Name of faculty	Qualification	Designation	Date of Appointment	No. of Years of Experience
1.	Dr. P. T. Humane	M. Sc., Ph.D., NET	Professor	16.06.2003	20 years
2.	Mrs. Amol Pimpalshende	M. Sc., NET	CHB, Approved by RTMNU	2023-24	NA
3.	Dr. Chandrakumar Patle	M. Sc., Ph.D., SET	CHB, Approved by RTMNU	2023-24	NA

4.	Dr. Mrs. Sweta Rai	M. Sc., Ph.D.	CHB, Approved by RTMNU	2023-24	NA
5.	Miss. Sushmita Singh	M. Sc., NET	CHB, Approved by RTMNU	2023-24	NA
6.	Miss. Payal Borkar	M. Sc., NET	CHB, Approved by RTMNU	2023-24	NA

**10. Number of academic support staff (technical) and administrative staff; sanctioned and filled:**

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	Lab. Assistant	01	01
2.	Lab. Attendant	02	01

**11. Number of activities organized: 18**

- 1) Farewell to Final year Students
- 2) To collect, identify and describe some common fungal members found in and around college campus or residence
- 3) To study the members of mushroom family in and around college campus and residence
- 4) To study the common plant disease found in and around college campus and residence
- 5) To Study the plants showing morphological characters of hydrophytes, xerophytes and epiphytes
- 6) To study food chain and food web in and around college campus or residence
- 7) To practice Vermicompost
- 8) Poster competition: Economic importance of Cyanobacteria and algae or classification of algae
- 9) To study biofertilizers commonly used by farmers.
- 10) To study the five Angiosperms found in college campus or around residence
- 11) To study the plants used in indoor gardening.
- 12) To study pollen grains of any five Angiosperm plants.
- 13) To collect, identify and describe some common bryophytes in and around college campus and residence.
- 14) To prepare word puzzles on Ecological factors
- 15) To collect, identify and describe some common algal members found in and around college campus or residence
- 16) To prepare work puzzle on Systematic Botany.
- 17) To prepare word puzzle on microbes (Viruses, Mycoplasma and bacteria)
- 18) Poster competition: Economic importance of Cyanobacteria and algae or classification of algae.

**12. Infrastructural Facilities:**

- a) **Laboratory:**
  - i) Spacious & well-furnished laboratory with 25 seating capacity, well equipped with the instruments and or equipment like, laminar airflow hood, centrifuge, calorimeter, autoclave, soxhlet apparatus, plant physiology apparatus, ecology apparatus, microscopes (dissecting, monocular, binocular, compound, projector, etc.)
  - ii) Mushroom cultivation room
- b) **Museum:**
  - i) Well maintained museum with over 500 specimens, from algae, fungi, bryophyta, pteridophyte, gymnosperms and angiosperms.
  - ii) Also, it is with the seating arrangement for the students to complete their practical records and to take their lunch.
- c) **Botanical Garden:**
  - i) Provided with variety of cultivated plants and the plants useful in UG practical in the subject.
  - ii) Also, medicinal plants and aquatic plants are cultivated for practical purpose.
- d) **Herbarium:**
  - i) Well maintained herbarium with over 3000 plant specimens stored in pigeon hole almirah useful for the students of UG, PG with botany as one of the subjects.
  - ii) Also, it is useful in research in angiosperm taxonomy, pharmacognosy and other related plant sciences.
- e) **Library:**
  - i) The separate departmental library with over 400 books, journals, e-books, floras, thesis, etc. In addition to the departmental library.
  - ii) The library for competitive examinations contains 600 over books is also there in the department developed under UGC's scheme 'Entry in Services'
- f) **ICT facilities:**
  - i) Computer with internet facilities, Wi-Fi, projector, etc. also, use of personal laptops and mobiles as ICT tools in teaching learning practices
- g) **E-books:**
  - i) More than 125 free downloaded e-books are available with the department useful for UG, PG and even in the research as test and reference books.
- h) **Staff rooms:**
  - i) Well-furnished and Separate seating arrangement for teaching and non-teaching staff which includes HOD Cabin, Teachers room with seating arrangement for technical staff of the department.

**13. Online Teaching assistance:**

- a) **Google meet:** Yes
- b) **Google forms:** Yes
- c) **Zoom platform:** Yes
- d) **Microsoft team:** Yes
- e) **YouTube channel link:** [BOTANY 4U - YouTube](#)
- f) **Number of videos / lectures available on YouTube channel:** **335**



**14. Faculty Profile:**

- a) **Dr. Pitambar Humane**, Associate Professor & Head of the Department
- i) **Research Papers Published:** Nil
  - ii) **Research Papers Presented:** Nil
  - iii) **Books Published/ Edited:** Nil
  - iv) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):** Nil
  - v) **Guest Lectures Delivered:** Nil
  - vi) **Seminars / Conferences / Workshops attended:** 01
    - 1) Participated in Regional Meet of Institution's Innovation Council (IIC), MoE's Innovation Cell, held on 13<sup>th</sup> Dec., 2023 at G. H. Raisoni College of Engineering, Nagpur
  - vii) **FDP attended:** Nil
  - viii) **Awards / Recognitions received:** Nil
- b) **Mr. Amol Pimpalshende**, CHB approved by RTM Nagpur University
- i) **Research Papers Published:** Nil
  - ii) **Research Papers Presented:** Nil
  - iii) **Books Published/ Edited:** Nil
  - iv) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):** Nil
  - v) **Guest Lectures Delivered:** Nil
  - vi) **Seminars / Conferences / Workshops attended:** Nil
  - vii) **FDP attended:** Nil
  - viii) **Awards / Recognitions received:** Nil
- c) **Dr. Chandrakumar Patle**, CHB approved by RTM Nagpur University
- i) **Research Papers Published:** Nil
  - ii) **Research Papers Presented:** Nil
  - iii) **Books Published/ Edited:** Nil
  - iv) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):** Nil
  - v) **Guest Lectures Delivered:** Nil
  - vi) **Seminars / Conferences / Workshops attended:** Nil
  - vii) **FDP attended:** Nil
  - viii) **Awards / Recognitions received:** Nil
- d) **Dr. Mrs. Sweta Rai**, CHB approved by RTM Nagpur University
- i) **Research Papers Published:** Nil
  - ii) **Research Papers Presented:** Nil
  - iii) **Books Published/ Edited:** Nil
  - iv) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):** Nil
  - v) **Guest Lectures Delivered:** Nil
  - vi) **Seminars / Conferences / Workshops attended:** Nil
  - vii) **FDP attended:** Nil
  - viii) **Awards / Recognitions received:** Nil

- e) **Miss. Sushmita Singh**, CHB approved by RTM Nagpur University
- i) **Research Papers Published:** Nil
  - ii) **Research Papers Presented:** Nil
  - iii) **Books Published/ Edited:** Nil
  - iv) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):** Nil
  - v) **Guest Lectures Delivered:** Nil
  - vi) **Seminars / Conferences / Workshops attended:** Nil
  - vii) **FDP attended:** Nil
  - viii) **Awards / Recognitions received:** Nil
- f) **Miss. Payal Borkar**, CHB approved by RTM Nagpur University
- i) **Research Papers Published:** Nil
  - ii) **Books Published/ Edited:** Nil
  - iii) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):** Nil
  - iv) **Guest Lectures Delivered:** Nil
  - v) **Seminars / Conferences / Workshops attended:** Nil
  - vi) **FDP attended:** Nil
  - vii) **Awards / Recognitions received:** Nil

15. **Students Achievements if any:** Nil

16. **Student Research Projects if any:** 01

- 1) **'To Study floristic biodiversity of angiosperms'**: The student centric project organized by Prof. Pitambar Humane, HOD, for the students. This project helps to create the interest among the students towards the subject and research in plant taxonomy too.

17. **Diversity of Students:**

- i) **Total number of students enrolled:** 176
- ii) **Number of Students from home state:** 176
- iii) **Number of Students from other state:** Nil

18. **Student strength & Result Analysis:**

<b>Name of the Semester</b>	<b>Enrolled Students</b>	<b>Appeared Students</b>	<b>Pass students</b>	<b>Pass percentage</b>
B. Sc. Sem.-I	50	50	16	32.00
B. Sc. Sem.-II	50	46	16	34.78
B. Sc. Sem.-III	68	39	19	48.72
B. Sc. Sem.-IV	68	39	20	51.28
B. Sc. Sem.-V	58	52	28	53.85
B. Sc. Sem.-VI	58	52	32	61.54

## 19. Student progression

Student progression	Against % enrolled
UG to PG	40-50%
PG to M. Phil.	NA
PG to Ph.D.	NA
Ph.D. to Post-Doctoral	NA
Employed	Nil
1) Campus selection	
2) Other than campus recruitment	
Entrepreneurship /Self-employment	Nil

20. Awards / Recognitions received by the students: Nil

## 21. Teaching methods adopted to improve student learning:

- i) Basics of the subject were taught to the students at entry level in bridge-course
- ii) Special attention was given to slow learners.
- iii) Extra classes were engaged for the students wherever necessary
- iv) Remedial classes were engaged for the failure students
- v) Class test and unit test were organized
- vi) Internal assignments on full course paper were given for internal assessment
- vii) Revision of the syllabus at the end of session with ICT
- viii) Field visits and Botanical excursion were organized.
- ix) Video lectures are made available on YouTube Channel, BOTANY 4U for UG & PG students and also for researchers & faculties in and around the globe in life sciences.

## 22. Participation in Institutional Social Responsibility (ISR) and Extension activities

- i) Most of the students of the department actively participates in almost all the activities organized by the institute.
- ii) Some of the students were engaged in NSS camp & Blood donation activities organized by the NSS Unit of the college.

23. Creativity & Innovations if any: Nil

## 23. SWOC analysis of the department and Future plans:

### a) Strength:

- i) Qualified and experienced teaching staff
- ii) Well maintained and rich herbarium with over 2000 plant specimens.
- iii) Separate departmental library with over 500 books.
- iv) Separate library for competitive examinations purchased under entry in services sanctioned by UGC.

- v) Well-equipped laboratory with ICT facility
- b) **Weaknesses:**
  - i) Faculty crunch because of govt policies for faculty recruitments
  - ii) Need to update the laboratory with advanced instruments / equipment as per the recent trends in research in the subject.
- c) **Opportunity:**
  - i) The students have job options available in BSI, department of forest and taxonomic research institutes, seed industry, nurseries, central research laboratories in life sciences.
  - ii) More avenues in the field of agricultural research and small-scale industries because of skill-based education in the subject.
- d) **Challenges:**
  - i) Find difficult to maintain the standard of the subject due to crunch of staff & necessary equipment in the laboratory.
  - ii) Skill-based education introduced in the subject need thorough update in laboratory instruments as per the experiments in the syllabi.
- e) **Future planning:**
  - i) To apply and undertake the major research projects
  - ii) To publish the research papers
  - iii) To publish the colour atlas for angiosperm plants
  - iv) To publish reference book on angiosperm taxonomy
  - v) To publish a flora of Bhandara district (M.S.) India
  - vi) To publish video lectures on YouTube Channel, BOTANY 4U, based on UG, PG & CSIR-UGC-NET (Life Sciences) syllabi and research in Life Sciences and also teaching learning practices, effective administration in higher education, etc.
  - vii) Development of Bonsai plants in botanical garden.
  - viii) Introduction of Student Centric Project 'To Study the Mycoflora'
  - ix) Introduction of Diploma in Mushroom Cultivation, one year course for the students of First year Botany and Home Science.

## Department of Chemistry Annual Report (2023-24)

1. **Name of the department** : Chemistry
2. **Year of Establishment** : 1968
3. **Names of Programmes/ Courses offered** : **No. of Certificates Course/s:01**  
(Certificate, UG, PG, M.Phil., Ph.D.,  
Integrated Masters; Integrated Ph.D., etc.)  
UG: B. Sc.  
PG: M.Sc.
4. **Names of Interdisciplinary courses and the departments/units involved**
  - i) Chemistry Botany Zoology (CBZ)
  - ii) Chemistry Botany Microbiology (CBM)
  - iii) Chemistry Zoology Microbiology (CZM)
  - iv) Physics Chemistry Mathematics (PCM)
  - v) Basic Chemistry for B.Sc. (Home Science), Sem.-I&II
  - vi) Applied Chemistry for B.Sc. (Home Science) Sem. III &IV
  - vii) Nutritional Biochemistry for B.Sc. (Home Science) Sem. V & VI
5. **Names of Certificate Courses if any:** Certificate Course in Introduction to Forensic Science.
6. **Collaborations/MoUs if any:** Nil
7. **Programme wise Annual/semester/choice-based credit system:**

Sr. No.	Name of the Courses	Annual	Semester	CBCS
1.	B.Sc.	-	Yes	-
2.	M.Sc. II	-	Yes	Yes
3.	Certificate Courses	Yes	-	-

### 8. Number of Teaching posts:

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	Professor		01
2.	Associate Professor	-	-
3.	Assistant Professor	09	-

**9. Teaching Faculty:**

<b>Sr. No.</b>	<b>Name of faculty</b>	<b>Qualification</b>	<b>Designation</b>	<b>Date of Appointment</b>	<b>No. of Years of Experience</b>
1.	Dr. Mrs. Vaishali P. Meshram	M.Sc., Ph.D., B. Ed	Professor & Head	06.02.2007	17 years
2.	Dr. Mrudul Keskar	M.Sc., Ph.D.,	CHB, Approved by RTMNU	2023-2024	NA
3.	Dr. Deepika Brijpuriya	M.Sc., Ph.D.	CHB, Approved by RTMNU	2023-2024	NA
4.	Dr. Sandeep Bhiwagade	M.Sc., Ph.D.	CHB, Approved by RTMNU	2023-2024	NA
5.	Dr. Pranita Gawande	M.Sc., PhD	CHB, Approved by RTMNU	2023-2024	NA
6.	Ms. Niharika Sute	M.Sc. SET	CHB, Approved by RTMNU	2023-2024	NA
7.	Dr. Yogita C. Morey (Dahire)	M.Sc., Ph. D	CHB, Approved by RTMNU	2023-2024	NA
8.	Ms. Kajal Narnaware	M.Sc. SET, NET	CHB, Approved by RTMNU	2023-2024	NA
9.	Dr. Bhavana Deshpande	M.Sc., Ph. D	CHB, Approved by RTMNU	2023-2024	NA
10.	Mr. Shailesh Dongre	M.Sc. SET	CHB, Approved by RTMNU	2023-2024	NA
11.	Dr. Keshab Bairagi	M.Sc., Ph. D	CHB, Approved by RTMNU	2023-2024	NA
12.	Ms. Akanksha Alsii	M.Sc. SET	CHB, Approved by RTMNU	2023-2024	NA
13.	Dr. Dayaram Sarve	M.Sc., Ph. D	CHB, Approved by RTMNU	2023-2024	NA

<b>14.</b>	Mr. Shubham Pawar	M.Sc. SET, NET	CHB, Approved by RTMNU	2023-2024	NA
<b>15.</b>	Mr. Siddharth Lonare	M.Sc. SET, NET	CHB, Approved by RTMNU	2023-2024	NA

**10. Number of academic support staff (technical) and administrative staff; sanctioned and filled:**

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
<b>1.</b>	Lab. Assistant	01	01
<b>2.</b>	Lab. Attendant	04	02

**11. Number of activities organized:05**

- 1) Bridge Course and Aptitude test was organized for B.Sc Sem I Student at the beginning of the Session-2023-24
- 2) Inauguration of Chemical society “Alchemy” 2023-2024 Installation of Chemical Society, “Alchemy”, 2023-2024 office bareron dated 21/09/2023
- 3) Organized Guest lecture under chemical Society Alchemy 2023-2024 by Mr. Anup ambaon the Topic, Carrier Guidance and Scope In Chemistry on dated 21/09/2023
- 4) Students Seminar was organized for M.Sc. Sem IV Students.
- 5) Late Dr. Suresh D. Palsokar Memorial Inter-Collegiate Power Point Presentation Competition organized by Department of Chemistry, Dharampeth M. P. Deo Memorial Science College, Nagpur on Friday 1<sup>st</sup> March, 2024 for the Undergraduate students of B.Sc. Science Stream.

**12. Infrastructural Facilities:**

**I. Laboratory:02**

Two well-equipped laboratories with important instruments like U-V Visible Spectrophotometer, Soil Water Analyzer Kit, Conductometer, Potentiometer, pH meter, Nephelometer, Calorimeter, well established distilled water plant etc.

**II. Library: Yes**

Departmental Library is also available for students with 320 of Books are available. out of the msomeare book are reference books, textbook, and some copies Rasayan Journal of chemistry are also available.

**III. ICT facilities: Yes**

LCD projector used during students’ seminars, during lecturers, one computer with internet connectivity and with one printer installed in the

department.

**IV. E-books:10**

**V. Staffroom:02**

Departmental Staff rooms are well furnished with necessary requirements.

**13. Online Teaching Assistance:**

- a) **Google meet:** Yes
- b) **Google forms:** Yes
- c) **Zoom platform:** Yes
- d) **Microsoft team:** Yes
- e) **YouTube channel link:** <https://youtu.be/hmsDHui5UT4>
- f) **Number of videos/lecturesavailableonYouTubechannel:**13

**14. Faculty Profile:**

**Dr. Mrs. Vaishali P. Mesharm, Professor & Head**

**1. Research Papers Published:02**

- 1) Published a review article in international journal of current Microbiology and Applied Sciences
- 2) Published a research paper on Hydrochemistry of groundwater in Chandrapur district in international journal of creative research.

**2. Research paper presented:07**

- 1) Presented Paper in 13<sup>th</sup> National conference on Thermodynamics of Chemical and Biological Systems 2023 Conducted by Post Graduate Department of Chemistry RTMNU Nagpur.
- 2) Presented Paper in National Symposium on “functional Material for Sustainable Development” organized by National Academy of Sciences India (NASI), Nagpur Chapter
- 3) Presented poster in International Analytical Science Congress IASC- 2024 organized by Indian Society of Analytical Scientists ISAS and JNARDDC, Nagpur in association with VNIT Nagpur & RCOCM and ISAS Nagpur chapter during 22- 24th February 2024.
- 4) Presented paper in international Conference on “Functional Material ICFM - 2024” held on 16th March 2024 organized by Nabira Mahavidyalaya, Katol in Association with ACT Mumbai.
- 5) Presented poster in the national Conference on Multidisciplinary Research and Studies organized by Department of Chemistry and IQAC, JN College Wadi on 20th March 2024.
- 6) Presented paper in International Conference on Advanced Sustainable Futuristic Material on April 20-27,2024Organised by Kamla Nehru Mahavidylaya Nagpur Sharda University, Greater Noida & NEERI, Nagpur.
- 7) Participated and presented a Poster in Second International Conference (Gold-CT-2024) organized by School of Chemical Sciences, Kavayitri Bahinabai Chaudhari North Maharashtra University Jalgaon on 18th- 19th September 2024

**3. Books Published / Edited: 05**



- 1) "A Text Book of Introduction to NANOTECHNOLOGY" Chemistry of Transition Metals
- 2) A Text Book of Principles of Environmental Science
- 3) Edited A Text book of FOOD ADULTRATION (GE/OE) for BSc. Semester-I as per National Education Policy (NEP-2020), Prescribed Syllabus of RTMNU Nagpur.
- 4) Edited A Text book of COSMETIC CHEMISTRY(GE/OE) for BSc. Semester- I as per National Education Policy (NEP-2020), Prescribed Syllabus of RTMNU Nagpur.

**4. Guest lecture delivered: Nil**

**5. Minor/Major Research Project (Sanctioned/Ongoing/Submitted): Nil**

**6. Seminars / Conferences / Workshops attended: 10**

- 1) Participated in 13<sup>th</sup> National conference on Thermodynamics of Chemical and Biological Systems 2023 Conducted by Post Graduate Department of Chemistry RTMNU Nagpur
- 2) Participated in National Symposium on "functional Material for Sustainable Development" organized by National Academy of Sciences India (NASI), Nagpur Chapter
- 3) Attended Two days International Multi disciplinary Conference Organized by Dr. Ambedkar College, Dikshabhumi Nagpur.
- 4) Participated in International Analytical Science Congress IASC- 2024 organized by Indian Society of Analytical Scientists ISAS and JNARDDC, Nagpur in association with VNIT Nagpur & RCOCM and ISAS Nagpur chapter during 22- 24th February 2024.
- 5) Participated in international Conference on "Functional Material ICFM -2024" held on 16<sup>th</sup> March 2024 organized by Nabira Mahavidyalaya, Katol in Association with ACT Mumbai.
- 6) Participated in the national Conference on Multidisciplinary Research and Studies organized by Department of Chemistry and IQAC, JN College Wadi on 20th March 2024.
- 7) Participated International Conference on Advanced Sustainable Futuristic Material on April 20 27,2024 Organised by Kamla Nehru Mahavidylaya Nagpur Sharda University, Greater Noida & NEERI, Nagpur.
- 8) Participated in DAE-BRNS Sponsored National Level Workshop on Advancements in Nanotechnology for a Greener Tomorrow on 16-20<sup>th</sup> July 2024 organized by Department of Chemical Engineering VNIT Nagpur.
- 9) Participated in Quiz ede Chimie on 10<sup>th</sup> August 2024 organized by Department of Chemistry VNIT Nagpur
- 10) Participated in Second International Conference (Gold-CT-2024) organized by School of Chemical Sciences, Kavayitri Bahinabai Chaudhari North Maharashtra University Jalgaon on 18th- 19th September 2024

**7. FDP attended:**

**8. Awards/Recognitions received:**

**2) Dr. Deepika Brijpuriya CHB approved by RTM Nagpur University**

**1. Research Papers Published:** Nil

**2. Research Paper Presented:**

i) Presented paper in international Conference on “Functional Material ICFM -2024” held on 16<sup>th</sup> March 2024 organized by Nabira Mahavidyalaya, Katol in Association with ACT Mumbai

**3) Dr. Bhavana Deshpande CHB approved by RTM Nagpur University**

**1. Research Papers Published:** Nil

**2. Research paper presented:**

i) Presented paper in international Conference on “Functional Material ICFM -2024” held on 16<sup>th</sup> March 2024 organized by Nabira Mahavidyalaya, Katol in Association with ACT Mumbai

**4) Mr. Shubham Pawar CHB approved by RTM Nagpur University**

**1. Research Papers Published:** Nil

**2. Research paper presented:**

i) Participated and presented a Poster in Second International Conference (Gold-CT-2024) organized by School of Chemical Sciences, Kavayitri Bahinabai Chaudhari North Maharashtra University Jalgaon on 18<sup>th</sup>-19<sup>th</sup> September 2024.

**15. Students Achievements if any: Yes**

1. Ms. Jyoti Sharma of B.Sc. (Sem VI) has Participated in Intercollegiate Seminar Competition organized by Mohata Science College Nagpur on 24<sup>th</sup> February 2024.
2. Ms. Jyoti Sharma, Mr. Sagar Bawane of B.Sc. (Sem VI) and Mr. Prajwal Hatwar of BSc. (Sem II) has Participated in Intercollegiate Seminar Competition organized by J.N. College Wadi, Nagpur on 7<sup>th</sup> march 2024.
3. Ms. Jyoti Sharma, Mr. Sagar Bawane of B.Sc. (Sem VI) and Mr. Prajwal Hatwar of BSc. (Sem II) has Participated in Intercollegiate Seminar Competition organized by S.K. Porwal College Kamptee.
4. Mr. Sagar Bawane of B.Sc. (Sem VI) won third prize in Dr. Suresh D. Palsokar intercollegiate Seminar Competition organized by Dharampeth M.P. Deo Memorial Science College, Nagpur on 1<sup>st</sup> March 2024.
5. Ms. Ms. Mrudul Fadnavis of (M.Sc.SemII) won First prize in Inter Collegiate Seminar Competition organized by P.G. Department of Chemistry Hislop College Nagpur on 1<sup>st</sup> April 2024.
6. Ms. Gayatri Fender and Mr. Yash Chamat of MSc. (Sem IV) won First prize in Inter Collegiate Quiz Competition organized by P.G. Department of Chemistry Hislop College Nagpur on 1<sup>st</sup> April 2024.
7. Ms. Gayatri Fender, Mr. Yash Chamat, Ms. Manju Prajapati, Ms. Vijaya Yele,

Ms. Pallavi Patel, Ms. Shital Hathwar of MSc. (Sem IV) has Presented poster in international Conference on “Functional Material ICFM -2024” held on 15th & 16th March 2024 organized by Nabira Mahavidyalaya, Katol in Association with ACT Mumbai.

**16. Student Research Projects if any: Nil**

**17. Diversity of Students:**

- i) Total number of students enrolled:707
- ii) Number of Students from homestate:707
- iii) Number of Students from other state:00

**18. Student strength & Result Analysis:**

Name of the Semester	Enrolled Students	Appeared Students	Pass students	Pass percentage
B.Sc. Sem.-I	101	97	31	31.95%
B.Sc. Sem.-II	93	87	15	17.24%
B.Sc. Sem.-III	95	90	54	60.00%
B.Sc. Sem.-IV	90	84	28	33.33%
B.Sc. Sem.-V	141	141	78	55.31%
B.Sc. Sem.-VI	140	138	60	43.47%
M.Sc. Sem-I	16	15	07	46.66%
M.Sc. Sem-II	15	15	09	60.00%
M.Sc. Sem-III	08	08	03	37.5%
M.Sc. Sem-IV	08	08	04	50.00%

**19. Student progression**

Student progression	Against % enrolled
UG to PG	40-50%
PG to M. Phil.	NA
PG to Ph.D.	NA
Ph.D.to Post-Doctoral	NA
Employed	Nil
<ul style="list-style-type: none"> <li>➤ Campus selection</li> <li>➤ Other than campus recruitment</li> </ul>	
Entrepreneurship/Self-employment	Nil

20. **Awards/Recognitions received by the students:** Nil
21. **Teaching methods adopted to improve student learning:**  
ICT used for Power point presentation; you tube link shared.
22. **Participation in Institutional Social Responsibility (ISR) and Extension activities:** Nil
23. **Creativity & Innovations if any:** Nil
23. **SWOC analysis of the department and Future plans:**
  - a) **Strength:**
    - i) Qualified and Experience faculty.
    - ii) Good number of publications in reputed international and national journals
    - iii) Good number of Conference attended and participated in conference in National and international online paper presentation and online workshop attended.
    - iv) Good number of Ph.D. faculty
  - b) **Weaknesses:**
    - i) Insufficient Industry Academia Interaction
  - c) **Opportunity:**
    - i) Scope of subject Chemistry in various field like Industries, Research and development, Thermal Power station and many more.
    - ii) To start PG, course in Chemistry
    - iii) To start Certificate or Diploma Courses related to chemistry.
    - iv) To increase Industry Academia interaction.
  - d) **Challenges:**
    - i) To Maintain Laboratory safety, use of LPG for practical
    - ii) To meet the need of industries by using existing curriculum
    - iii) Creating awareness about self-employment
  - e) **Future planning:**
    - i) To start Certificate/Diploma courses related chemistry
    - ii) To Organize National Conference

**Department of Computer Science**  
**Annual Report (2023-24)**

1. **Name of the department** : **Computer Science**
2. **Year of Establishment** : 2001
3. **Names of Programmes / Courses offered** : **No. of Certificates Course/s: 03**  
(Certificate, UG, PG, M.Phil., Ph.D.,  
Integrated Masters; Integrated Ph.D., etc.) **Diploma Course/s:01**  
**UG: B. Sc.**  
**PG: Nil**
4. **Names of Interdisciplinary courses and the departments/units involved**
  - i) Physics Mathematics Computer Science (PMCOM)
  - ii) Statistics Mathematics Computer Science (SMCOM)
  - iii) Electronics Mathematics Computer Science (EMCOM)
5. **Names of Certificate Courses if any:**
  - i) IIT Spoken Tutorial Certificate Course (NMEICT MoE (prev. MHRD) Govt. of India)
  - ii) Carrer Oriented Certificate Course in Bioinformatics (Under UGC scheme)
  - iii) Diploma in Bioinformatics (Under UGC scheme)
  - iv) Excel for Banking and Accounts (Under Jeevan Shikshan Abhiyan Department of lifelong learning and extension, RTMNU, Nagpur)
6. **Collaborations / MoUs if any:** Nil

**7. Programme wise Annual/ semester/choice-based credit system:**

Sr. No.	Name of the Courses	Annual	Semester	CBCS
1.	Certificate Courses	03		-
2.	Diploma Courses	01		
3.	B. Sc	-	Yes	-
4.	M. Sc II	-	-	-

**8. Number of teaching posts**

Sr. No.	Name of Post	2023-2024	
		Sanctioned	Filled
1.	Professor	-	-
2.	Associate Professor	-	-
3.	Assistant Professor	04	01

**9. Teaching Faculty: 2023-2024**

Sr. No.	Name of faculty	Qualification	Designation	Date of Appointment	No. of Years of Experience

1.	Dr. Mrs. Snehal Narale	M.Sc., M.Phil., Ph.D.	Assistant Professor & Head (Regular Ad-hoc, Approved by RTMNU)	16.06.2009	15 years 7 months
2.	Mrs. Ruma Kapre	B. Sc., MCA	Assistant Professor (Ad-hoc)	2023-2024	NA
3.	Mrs. Poonam Jaiswal	M.Sc.	Assistant Professor (Ad-hoc)	2023-2024	NA

**10. Number of academic support staff (technical) and administrative staff; sanctioned and filled:**

Sr. No.	Name of Post	2023-2024	
		Sanctioned	Filled
1.	Lab. Assistant	NA	-
2.	Lab. Attendant	NA	-

**11. Number of activities organized: 27[NEP]**

1. Power Point Presentation Activity/Competition was organized for the students of B.Sc. II SEM III on Unit III of Paper I [Data Structures] on 21/9/2023. Total 50 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
2. Group Discussion on Linked List activity was conducted for the students of B.Sc. Sem III on Paper I Data Structures [ Unit I] on 28/10/2023. Total 49 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
3. One Day Workshop was organized for the students of B.Sc. SEM III of Unit IV Paper I[Data Structures] on 29/9/2023. Total 41 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
4. E-Poster Making competition was organized for the students of B.Sc. II [SEM III] on Unit II of Paper I [Data Structures] on 30/10/2023. Total 48 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
5. Hands on Training on topic Creating Menus and Pop-Up Menus on Unit III of Paper I [Visual Basic Programming] on dated 12/03/2023 was organized for the students of B.Sc. SEM V. Total 43 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
6. Power Point Presentation Activity on Unit IV of Paper I [Visual Basic Programming] on dated 26/10/2023 was organized for the students of B.Sc. SEM V. Total 41 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
7. Project Design Activity on Unit I of Paper I [Visual Basic Programming] on dated 23/08/2023 was organized for the students of B.Sc. SEM V. Total 42 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
8. E-Poster Making Activity on Unit II of Paper I [Visual Basic Programming] on dated 22/09/2023 was organized for the students of B.Sc. SEM V. Total 42 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.

9. Power Point Presentation Activity/Competition was organized for the students of SEM IV of Paper II [Linux Operating System] on Unit II dated 28/3/2024. Total 26 students participated in this activity. The Activity is conducted by Dr. Snehal Narale.
10. Group Discussion activity was organized for the students of B.Sc. Sem IV on Paper II [ Linux Operating System [ Unit I, Linked List] on dated 07/03/2024. Total 24 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
11. Chart Making Activity was organized for the students of B.Sc. SEM IV of Unit III Paper II [Linux Operating System] on dated 12/04/2024. Total 27 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
12. E-Poster Making activity was organized for the students of SEM IV on Paper II [Linux Operating Systems] of Unit IV on dated 26/04/2024. Total 27 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
13. Project Designing activity of Design a Student Based Management System using VB as Front End was organized for the students of B.Sc. Sem VI on Paper II [SQL and PL/SQL, Unit III] on 26/03/2024. Total 51 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
14. Power Point Presentation Activity/Competition was organized for the students of SEM VI on Paper II of unit IV on dated 26/04/2024. Total 51 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
15. Group Discussion Activity was organized for the students of B.Sc. Sem VI [ Paper II, Unit I] on 27/02/2024. Total 53 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
16. Chart Making Activity was organized for the students of B.Sc. SEM VI of Unit II Paper II on 12/03/2024. Total 54 students participated in this activity. The Activity was conducted by Dr. Snehal Narale.
17. SEM I-Unit I-NEP Activity on Algorithm and Flowchart Making was organized for SEM I Students on 31<sup>st</sup> October 2023. 46 students participated in the activity. The Activity was conducted by Mrs. Ruma Kapre
18. SEM I Unit II NEP Activity Chart Making was organized for SEM I students on 2<sup>nd</sup> November 2023. Total 49 students participated in the activity. The Activity was conducted by Mrs. Ruma Kapre
19. Sem I Unit III NEP Activity on Error Debugging was organized for SEM I students on 3<sup>rd</sup> November 2023. Total 54 students participated in the activity. The Activity was conducted by Mrs. Ruma Kapre
20. SEM I Unit IV NEP Activity Program Coding in C Language for SEM I students was organized on 4<sup>th</sup> November 2023. Total 51 students participated in the activity. The Activity was conducted by Mrs. Ruma Kapre.
21. SEM V NEP Unit II Activity on E-R Model for SEM V students was organized on 1<sup>st</sup> November 2023. 32 students participated in the activity. The Activity was conducted by Mrs. Ruma Kapre
22. SEM V NEP Unit III Activity on Relational Database Queries was organized for SEM V students on 3<sup>rd</sup> November 2023. In all 35 students participated in the activity. The Activity was conducted by Mrs. Ruma Kapre.
23. SEM V Unit IV NEP Activity on Functional Dependencies was organized for

- SEM V Students on 3<sup>rd</sup> November 2023. In all 35 students participated in the activity. The Activity was conducted by Mrs. Ruma Kapre
24. Poster making Activity was organized by Mrs. Poonam Jaiswal on 29/10/2023 for the students of Sem I.
  25. Seminar presentation was organized by Mrs. Poonam Jaiswal on 3/11/2023 for the students of Sem I.
  26. Power Point Presentation activity on 2/11/2023 for the students of Sem IV by Mrs. Poonam Jaiswal
  27. Workshop on Installation of OS on Unit I for the students of Sem IV on 4/11/2023 by Mrs. Poonam Jaiswal

**12. Infrastructural Facilities:**

- a) **Laboratory:** Yes. The laboratory admeasures 69.67 sq. m.
- b) **Library:** The departmental library is small. The Books are donated by faculty members and Alumni of the department are available in the departmental library.
- c) **ICT facilities:** LCD Projector is available in the department.
- d) **E-books:** 127
- e) **Staff room: Yes, Staff room:** The departmental staff room is well furnished with all basic amenities.

**13. Online Teaching assistance:**

- a) **Google meet:** Yes
- b) **Google forms:** Yes
- c) **Zoom platform:** No
- d) **Microsoft team:** Yes
- e) **YouTube channel link:** [Snehal Narale - YouTube](#)
- f) **Number of videos / lectures available on YouTube channel:** 11

**14. Faculty Profile:**

- a) **Dr. Mrs. Snehal Narale,** Assistant Professor & Head (Regular Ad-hoc)
- i) **Research Papers Published:** 01
- ii) **Research Papers Presented:** Nil
- iii) **Books Published/ Edited:** Nil
- iv) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):** Nil
- v) **Guest Lectures Delivered:** 01  
Delivered a Guest Lecture on Bioinformatics at Dharampeth M. P. Deo Memorial Science College, Nagpur for Final Year students of Zoology.
- vi) **Seminars / Conferences / Workshops attended:** 04
  1. Attended National Conference on emerging Trends in Computational Science and Technology organized by Shri Shivaji Science College, Amravati on 22<sup>nd</sup> March 2024.
  2. One Day Online Seminar on Intellectual Property Rights Dharampeth M. P. Deo Memorial Science College, Nagpur, Santaji Mahavidyalaya, J.M. Patel Arts, Commerce and Science College, Bhandara, Bar. Sheshrao Wankhede Arts and Commerce College, Khaperkheda organized One Day Online Seminar on Intellectual Property Rights on 7<sup>th</sup> May 2024.



3. Three Day Workshop on National Education Policy-2020 from 29<sup>th</sup> to 31<sup>st</sup> May 2024 organized by Dharampeth M. P. Deo Memorial Science College, Nagpur, Santaji Mahavidyalaya, J.M. Patel Arts, Commerce and Science College, Bhandara, Bar. Sheshrao Wankhede Arts and Commerce College, Khaperkheda
4. One Day National Level Workshop on Creation of Courses for Swayam and Mooc organized by Dharampeth M. P. Deo Memorial Science College, Nagpur, Santaji Mahavidyalaya, J.M. Patel Arts, Commerce and Science College, Bhandara, Bar. Sheshrao Wankhede Arts and Commerce College, Khaperkheda on 21<sup>st</sup> October 2023.

**vii) FDP attended:** Nil

**viii) Awards / Recognitions received:** 01

- 1) Dr. Snehal Narale Received Appreciation letter from Spoken Tutorial, IIT Bombay (NMEICT, MoE (prev. MHRD, GOI) for spreading awareness and holding Software Training workshops at Dharampeth M.P. Deo Memorial Science College Nagpur.
- 2) Received Certificate from Spoken Tutorial, IIT Bombay as Organiser for the successful conduction and organization of Training at college centre.

**ix) Others:**

Worked as coordinator for National Level Tech Tango Poster Essay Competition -2024. The Competition was organized by Department of Computer Science, Hislop College, Nagpur in Collaboration with Association of All Computer Science Teachers (AACST)

**Mrs. Ruma Kapre: Assistant Professor (Ad-hoc)**

**i) Research Papers Published:** Nil

**ii) Research Papers Presented:** Nil

**iii) Books Published/ Edited:** Nil

**iv) Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):**  
Nil

**v) Guest Lecture Delivered:** Nil

**vi) Seminars / Conferences / Workshops attended:** 03

1. One Day Online Seminar on Intellectual Property Rights Dharampeth M. P. Deo Memorial Science College, Nagpur, Santaji Mahavidyalaya, J.M. Patel Arts, Commerce and Science College, Bhandara, Bar. Sheshrao Wankhede Arts and Commerce College, Khaperkheda organized One Day Online Seminar on Intellectual Property Rights on 7<sup>th</sup> May 2024.
2. Three Day Workshop on National Education Policy-2020 from 29<sup>th</sup> to 31<sup>st</sup> May 2024 organized by Dharampeth M. P. Deo Memorial Science College, Nagpur, Santaji Mahavidyalaya, J.M. Patel Arts, Commerce and Science College, Bhandara, Bar. Sheshrao Wankhede Arts and Commerce College, Khaperkheda
3. One Day National Level Workshop on Creation of Courses for Swayam and Mooc organized by Dharampeth M. P. Deo Memorial Science College, Nagpur, Santaji Mahavidyalaya, J.M. Patel Arts, Commerce and Science College, Bhandara, Bar. Sheshrao

Wankhede Arts and Commerce College, Khaperkheda on 21<sup>st</sup>  
October 2023.

**vii) FDP attended: Nil**

**viii) Awards / Recognitions received: Nil**

**Mrs. Poonam Jaiswal, Assistant Professor (Ad-hoc)**

**i) Research Papers Published: Nil**

**ii) Research Papers Presented: Nil**

**iii) Books Published/ Edited: Nil**

**iv) Minor / Major Research Project (Sanctioned / Ongoing/ Submitted): Nil**

**v) Guest Lecture Delivered: Nil**

**vi) Seminars / Conferences / Workshops attended: Nil**

**vii) FDP attended: Nil**

**viii) Awards / Recognitions received: Nil**

**15. Students Achievements if any:**

- 1) Ms. Rutika Yadav of B.Sc. II has secured second prize in a national level online tech tango poster essay competition conducted by Hislop college.
- 2) Ms. Rutuja Santosh Wanare of Class: BSC 1<sup>st</sup> year participated in
- 3) National Level Tech Tango Poster Essay Competition Conducted By Hislop College, Nagpur
- 4) PPT Making Competition organized by SFS College, Nagpur
- 5) Ruchika Prakash Kurhadkar and Isha Ramesh Kewate of B.Sc.II Participated in quiz competition Held on 23 August 2024 organized by YCCE college in online mode
- 6) Priyanka Nagdeve, Sejal Chichmalkar, Naina Fukat, Ruchika Kurhadkar, Muskan Mathure, Isha Kewate, Gauri Dhone, Nandini Kalbhut, Pallavi Mathane, Sharwari Sahastrabuddhe, Suhani Chaubey Tanushree Dangre students of B.Sc.[I] were participated in National Level Tech Tango Poster Essay Competition Conducted by Hislop College, Nagpur. They also received certificate of participation.
- 7) Ms. Tanu Singh student of B.Sc. II Participated in
  - i. A National Level Tech Tango Poster Essay Competition Conducted by Hislop College, Nagpur
  - ii. PPT Making Competition Conducted by SFS College, Nagpur, LAD College, Nagpur and Santaji Mahavidyalaya, Nagpur
  - iii. Rutuja Santosh Wanare local awards winner of Quick heal foundation which is highest offline outreach (2024)
  - iv. Vaibhav Dhole nominated for a best secretary state level award organize by Quick heal foundation (2024)

**16. Student Research Projects if any: Nil**

**17. Diversity of Students**

**i) Total number of students enrolled: 205**

**ii) Number of Students from home state: 204**

**iii) Number of Students from other state: 01**

**18. Student strength & Result Analysis:**

Name of the Semester	Enrolled Students	Appeared Students	Pass students	Pass percentage
B. Sc. Sem.-I	79	79	20	25.31
B. Sc. Sem.-II	69	69	28	40.57
B. Sc. Sem.-III	66	66	23	34.84
B. Sc. Sem.-IV	63	63	24	38.09
B. Sc. Sem.-V	60	60	26	43.33
B. Sc. Sem.-VI	59	59	26	44.06

**19. Student Progression**

Student progression	Against % enrolled
UG to PG	15-20%
PG to M. Phil.	NA
PG to Ph.D.	NA
Ph.D. to Post-Doctoral	NA
Employed ➤ Campus selection ➤ Other than campus recruitment	Nil
Entrepreneurship /Self-employment	Nil

**20. Awards / Recognitions received by the students:**

- 1) Rutika Yadav of B.Sc. II has secured second prize in a national level online tech tango poster essay competition conducted by Hislop college.

**21. Teaching methods adopted to improve student learning:**

- i) Use of Tools like Google Doc, Gmail, sheets, Drive, Calendar and Classroom
- ii) Teaching using Power Point Presentation.
- iii) Various presentation, seminars and demonstrations using LCD Projector.
- iv) Various concepts are explained with the help of diagrammatic representation.
- v) Assignments are given to the students and Unit Tests are conducted as a part of their Internal Assessments. Third year students develop their projects using Visual Basic as a front end and Oracle/MS-Access as backend.
- vi) Teachers are always available for one-to-one interaction for clearing their queries.
- vii) We provide Internet access to the students.
- viii) We conduct technical and aptitude test based on fundamental of the various topics from their syllabus.
- ix) Students prepared their presentations emphasis
- x) We give emphasis to the preparation of PPT by students to improve their presentation and communication skills.
- xi) Organize workshop for the students to develop and enhance the interest in the of research.

**22. Participation in Institutional Social Responsibility (ISR) and Extension activities**

- i) Most of the Faculty members of the department are in various college committees.

**23. Creativity & Innovations if any:** Online Portal ([www.dscscsdproject001.in](http://www.dscscsdproject001.in))

**24. SWOC analysis of the department and Future plans:**

**a) Strength:**

- i) Holistic Development through Ad-on Certificate Courses
- ii) Preference to opt the subject
- iii) Qualified teaching staff Effective use of ICT in Teaching Learning Process.
- iv) Student Centric Functioning with mentoring and counselling through teachers.

**b) Weaknesses:**

- i) No PG program.
- ii) Required more approved staff
- iii) Inadequate Space and Infrastructure to implement research activity

**c) Opportunity:**

- i) Strengthen Industry Institution Interaction
- ii) Scope to improve placement Ratio
- iii) Enhancement of graduate programs.
- iv) To Arrange Training Program for the faculty.

**d) Challenges:**

- i) More students less no of computers
- ii) Enhancement of Research aptitude.
- iii) Strengthening Interdisciplinary Approach
- iv) One to one communication with the students to solve their emotional and personal problem.
- v) Making the provision of virtual classroom to the students.

**e) Future planning:**

- i) To organize more no. of soft skill development programme for students to improve their language and Computational skills & etiquettes.
- ii) To introduce more short-term certified courses which will help the students to meet the requirements as per the demand of industry.
- iii) Planning to have more numbers of projects for third year students.
- iv) Planning to have local and outstation industrial visits and study tours for all students which expose the students to the real world and provide an opportunity of on-site study.
- v) Progressing the infrastructure of the departmental lab.
- vi) Incorporating the use of electronic media and information and communication technologies (ICT) in education (E-learning) such as: TEL, IBT

**Department of Electronics**  
**Annual Report (2023-24)**

1. **Name of the department** : Electronics
2. **Year of Establishment** : 1985
3. **Names of Programmes/Courses offered** : **No. of Certificates Course/s:** Nil  
(Certificate, UG, PG, M.Phil., Ph.D., UG: B. Sc.  
Integrated Masters; Integrated Ph.D., etc.) PG: Nil
4. **Names of Interdisciplinary courses and the departments/units involved**
  1. Physics Maths Electronics (PME)
  2. Electronics Computer Science Maths (ECoM)
5. **Names of Certificate Courses if any:** Nil
6. **Collaborations / MoUs if any:** one
7. **Programme wise Annual/semester/choice-based credit system:**

Sr. No.	Name of the Courses	Annual	Semester	CBCS
1.	B. Sc	-	Yes	-
2.	M. Sc II	-	-	-
3.	Certificate Courses	-	-	-

**8. Number of Teaching posts:**

Sr. No.	Name of Post	2020-21	
		Sanctioned	Filled
1.	Professor	-	-
2.	Associate Professor	-	-
3.	Assistant Professor	03	01

**9. Teaching Faculty:**

Sr. No.	Name of faculty	Qualification	Designation	Date of Appointment	No. of Years of Experience
1.	Dr. Mrs. Varsha V. Rangari	M. Sc., Ph.D., SET	Associate Professor & Head	12.05.2007	17 years

**10. Number of academic support staff (technical) and administrative staff; sanctioned and filled:**

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	Lab. Assistant	01	01
2.	Lab. Attendant	01	00

**11. Number of activities organized: Nil**

**12. Infrastructural Facilities:**

- a) **Laboratory:** Have well equipped Laboratory for hardware experiments and Computer lab. for programming
- b) **Museum:** No
- c) **Library:** Yes
- d) **ICT facilities:** Yes, one projector and internet facility.
- e) **E-books:** Yes
- f) **Staff room:** Yes

**13. Online Teaching assistance:**

- 1. **Google meet:**
- 2. **Google forms:**
- 3. **Zoom platform:**
- 4. **Microsoft team:**
- 5. **YouTube channel link:**
- 6. **Number of videos / lectures available on YouTube channel: 2**

**14. Faculty Profile:**

- a) **Dr. Varsha Rangari, Head of the Department**
  - i) **Research Papers Published:** Nil
  - ii) **Books Published/ Edited:** Nil
  - iii) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):** Nil
  - iv) **Seminars / Conferences / Workshops attended:** Nil
  - v) **FDP attended:** Nil
  - vi) **Awards/Recognitionsreceived:** No

**15. Students Achievements if any:**

- 1. 8 students from our department, make aware the students of different schools about the Cyber Crime and security by giving presentations in the 33 schoolsdelivering 66 presentations and sensitizing 13,191 students to the importance of digital safety..

**16. Student Research Projects if any: Nil**

**17. Diversityof Students**

- **Total number of students enrolled:79**
- **Number of Students from home state:79**
- **Number of Students from other state: 00**

**18. Student strength & Result Analysis:**

Name of the Semester	Enrolled Students	Appeared Students	Pass students	Pass percentage
B. Sc. Sem.-I	31	29	16	55.17
B. Sc. Sem.-II	31	29	11	41
B. Sc. Sem.-III	21	21	12	57.14
B. Sc. Sem.-IV	21	21	9	42.85
B. Sc. Sem.-V	27	27	14	51.85
B. Sc. Sem.-VI	27	27	13	48.14

**19. Student progression**

Student progression	Against % enrolled
UG to PG	20-30%
PG to M. Phil.	NA
PG to Ph.D.	NA
Ph.D.toPost-Doctoral	NA
Employed ➤ Campusselection ➤ Other than campus recruitment	Nil
Entrepreneurship /Self-employment	Nil

**20. Awards/Recognitions received by the students: Nil****21. Teaching methods adopted to improve student learning:**

1. Seminars and Guest Lectures
2. Hands on training
3. Power point presentation
4. Use of simulation

**22. Participation in Institutional Social Responsibility (ISR) and Extension activities**

1. Being a Member of NSS unit of the college , actively conducts various social activities.

**23. Creativity & Innovations if any: Nil****24. SWOC analysis of the department and Future plans****a) Strength:**

- Competent and well qualified staff.
- Good results as compared to other colleges.
- Availability of Research facilities.

**b) Weaknesses:**

- Insufficient teaching staff.
- Input of low caliber students

**c) Opportunity:**

- Most UG students can do PG in Electronics.
- Students can appear for Competitive examination.
- Employment in Electronics & research Industries.

**d) Challenges:**

- Less scope to Electronics Science since B.E. in Electronics is more preferred.
- Less job opportunities in pure Electronics.

**e) Future planning:**

- To enhance students' exposure to the development in the field of electronic
- Plan to organize skill-oriented workshops, so that students can get hands on training.
- To Start certificate course on skill-oriented topics & add-on courses.
- To start interdisciplinary research work.
- To reuse the discarded smart mobile phone as a server to store the Electronics subject related information for the electronics students



**Department of Languages  
Annual Report (2023-2024)**

1. **Name of the department** : **Languages**
2. **Year of Establishment** : **1968**
3. **Names of Programmes/Courses offered** : **No. of Certificates Course/s: Nil**  
(Certificate, **UG: B. Sc.**  
**UG, PG, M.Phil., Ph.D., Integrated Masters; PG: Nil**  
**Integrated Ph.D., etc.)**
4. **Names of Interdisciplinary courses and the departments /units involved:**
  - i) English
  - ii) Hindi
  - iii) Marathi
  - iv) Sanskrit
5. **Names of Certificate Courses if any: Nil**
6. **Collaborations / MoUs if any: Nil**
7. **Programme wise Annual/semester/choice-based credit system:**

Sr. No.	Name of the Courses	Annual	Semester	CBCS
1.	B. Sc.	-	Yes	-
2.	B. Sc. H.Sc.	-	Yes	-

**8. Number of teaching posts:**

Sr. No.	Name of Post	2023-2024	
		Sanctioned	Filled
1.	Assistant Professor(Full Time)	01	01

**9. Teaching Faculty:**

Sr. No.	Name of faculty	Qualification	Designation	Date of Appointment	No. of Years of Experience
<b>English</b>					
1.	Dr. Akhilesh Peshwe	B.Sc., M.A, L.L.B, M.Ed. (Texas)	Principal	14.03.2016	9 years
2.	Dr. S. A. Deshpande (English)	B.Tech, M.A, SET, Ph.D.	Assistant Professor & Head	07.02.2007	18 years
<b>Hindi</b>					

3.	Mrs. Ekadashi Jaitwar	-	Clock Hour Basis	NA	NA
<b>Marathi</b>					
4.	Dr. Padma Nagdeve	-	Clock Hour Basis	NA	NA
<b>Sanskrit</b>					
5.	Mrs. Vishakha Kaskhedikar	-	Honourary Faculty (Junior College Lecturer)	NA	NA

**10. Number of academic support staff (technical) and administrative staff; sanctioned and filled:**

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	NA	NA	NA

**11. Number of activities organized:**

1. **Bridge Course in English** was conducted from 19<sup>th</sup> to 26<sup>th</sup> August 2023 to help learners to understand Basic English Vocabulary and to familiarize learners with the basics of grammar.
2. **Essay Writing** All the students are hereby informed that should submit an essay on any one of the following topics given below: 1. Booker Washington: My Ideal 2. Booker Washington's ideas on Education 3. Compare and Contrast Ideas of W.E.B. Dubois and Booker T. Washington 4. "The Atlanta Compromise Speech" by Booker T. Washington: A Review on 4<sup>th</sup> September 2023
3. **A Letter writing** was conducted on the topic: as Subroto Bagchi, a thanksgiving letter to your parents for teaching your life lessons on 25<sup>th</sup> September 2023.
4. **Paragraph Writing Activity** on the following topics: • A special birthday • My favorite actor • Making my favorite food • Importance of cleaning was conducted on 31<sup>st</sup> October 2024.
5. **Pictionary Making Activity** on following theme: 1. The Tree Questions: Leo Tolstoy 2. The Story of an Hour: Kate Chopin 3. Mr. Know. All: W.S. Maugham on 31<sup>st</sup> October 2023.
6. **Scrap Book Making** on Five Starts of India' Five Innovations/Innovative Start-Ups on 4<sup>th</sup> April 2024.
7. **Scrap Book Making** on Synthesis of Science and Spirituality on the following topics:
  1. Relationship between Science and Spirituality
  2. Science and Spirituality and

Pandemics 3. Noble Laureates on science and Spirituality 4. The Union of Science and Spirituality 5. Science and Spirituality in Modern India 22nd March 2024.

**12. Infrastructural Facilities:**

- a) **Library:** Nil
- b) **ICT facilities:** (Desktop and Printer)
- c) **E-books:** 20
- d) **Staff room:** 01

**13. Online Teaching assistance:**

- a) **Google meet:** No
- b) **Google forms:** Yes
- c) **Zoom platform:** Yes
- d) **Microsoft team:** No
- e) **YouTube channel link:** [Shraddha Deshpande - YouTube](#)
- f) **Number of videos / lectures available on YouTube channel:** 19

**14. Faculty Profile:**

- a) **Dr. Akhilesh Peshwe,** Principal
- b) **Dr. Shraddha Deshpande,** Assistant Professor and Head of the Department
  - i) **Research Papers Published:** Nil
  - ii) **Books Edited:** Nil
  - iii) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):** Nil
  - iv) **Guest Lectures Delivered:** Nil
    - i) **Delivered a Guest Lecture** Dr. G. S. Gulhane, Prerna College of Commerce, Science and Arts, On the topic: English Language and job opportunities 12 January 2024.
    - ii) **Poem Recitation** entitled, 'Nameless Coffee' at an event An Evening with Poets organized by Dept of English, Dr S. C. Gulhane Prerna College of Commerce, Science and Arts, Reshimbag, Nagpur today.
  - v) **Seminars / Conferences / Workshops attended:**
    - i) Actively participated in 8 Days National Online Training Programme on "Indian Knowledge Systems" From 23rd November 2023 to 2nd December 2023 organized by IQAC Matru Sewa Sangh Institute of Social Work, Nagpur Rajkumar Kewalramani Kanya Mahavidyalaya, Nagpur Green Heaven Institute of Management and Research, Nagpur Manoharrao Kamdi Mahavidyalaya, Nagpur Rabindranath Tagore College of Arts, Science & Commerce, Nagpur
  - vi) **Awards/Recognitions received:**
    - i) **EK NARI Award for Contribution to Student Development** by "LEADERS OF BHARAT", CHAPTER 9 on 29th February 2024 at, New Delhi. Global Empire Events & Biz Nation BY \*#GEE - GREATEST ENTREPRENEURS & EDUCATORS.

- ii) **Iconic Woman Award for Best Teacher in English** by the hands of Honorable Vice President of Dharampeth Education Society Shri. Ratnakar Kekatpure sir, Honorable member Shri. Deo Sir and Honorable Principal, Dr. Akhilesh Peshwe Sir. on 7<sup>th</sup> February 2024.

15. **Students Achievements if any:** Nil

16. **Student Research Projects if any:** Nil

17. **Diversity of Students:**

- i) **Total number of students enrolled:**192  
 ii) **Number of Students from home state:**192  
 iii) **Number of Students from other state:**Nil

18. **Student Strength &Result Analysis: -**

**Student strength & Number of Students passed:**

	<b>B.Sc. Sem I</b>	<b>WINTER 2023</b>		
<b>Subject</b>	<b>Number of students due</b>	<b>Number of Students Appeared</b>	<b>Number of Students passed</b>	<b>Percentage of result</b>
<b>Compulsory English</b>	192	183	141	77.04%
<b>Supplementary English</b>	47	46	40	86.95%
<b>Hindi</b>	69	68	55	80.88%
<b>Marathi</b>	72	70	62	88.57%
<b>Sanskrit</b>	3	3	2	67%
	<b>B.Sc. H.Sc. Sem I</b>			
<b>English and Communication Skills</b>	18	17	16	94.11%

	<b>B.Sc. Sem I</b>	<b>SUMMER 2024</b>		
<b>Subject</b>	<b>Number of students due</b>	<b>Number of Students Appeared</b>	<b>Number of Students passed</b>	<b>Percentage of result</b>
<b>Compulsory English</b>	173	167	147	88.02%
<b>Supplementary English</b>	46	44	41	93.18%
<b>Hindi</b>	58	57	50	87.71%
<b>Marathi</b>	66	65	53	81.53%
<b>Sanskrit</b>	2	1	1	50%
	<b>B.Sc. H.Sc. Sem</b>			

	<b>I</b>			
<b>English and Communication Skills</b>	15	14	10	71.42%

- 20. Awards/Recognitions received by the students: Nil**
- 21. Teaching methods adopted to improve student learning:**
- i) Innovative Writing skills activities
  - ii) Open forum Learning
  - iii) Discussion based Learning
- 22. Participation in Institutional Social Responsibility (ISR) and Extension activities:**
- i) Students' participation in Rotaract Club activities
  - ii) Students' participation in NSS activities
- 23. Creativity & Innovations if any:**
- i) Pictionary: Students created a Pictionary for reference
- 23. SWOC analysis of the department and Future plans:**
- a) **Strength:**
    - i) High Profile faculty
    - ii) Teaching learning methodology
    - iii) Strengthening of Social and Human Values among students
    - iv) Rapport with students
  - b) **Weaknesses:**
    - i) Handling large classrooms
    - ii) Lack of Connect due to online mode of teaching
    - iii) Lack of seriousness about language learning
  - c) **Opportunity:**
    - i) Communication Skills and Personality Development Courses
    - ii) Skill Development for Competitive Exams Courses
    - iii) GRE, TOEFL Courses
  - d) **Challenges:**
    - i) Adjustment of bigger batches
    - ii) Time constraints to improve poor grammar and vocabulary skills
    - iii) Mixed ability classrooms
  - e) **Future planning:**
    - i) To focus on English Language Communicative Skills Development
    - ii) To update teaching learning methods of English language learning
    - iii) To incorporate activity-based learning programmes

## DEPARTMENT OF HOME SCIENCE

### Annual Report (2023-2024)

1. Name of the department : Home Science
2. Year of Establishment : 1981
3. Names of Programmes/Courses offered (Certificate, UG,PG,M.Phil.,Ph.D.,Integrated Masters;IntegratedPh.D.,etc.) : Diploma Course/s:NA  
Certificates Course/s:UG:B.Sc Home Science + 2 Certificate courses  
PG:NA
4. Names of Interdisciplinary courses and the departments/units involved :
5. Names of Certificate Courses if any : Certificate course In-  
Event Management  
SINGER Certificate Course
6. Collaborations / MoUs if any : NA
7. Programme-wise Annual/semester/choice-based credit system:

Sr. No.	Name of the Courses	Annual	Semester	CBCS
1.	Certificate Course/s	-	Yes	-
2.	Diploma Course	-	-	-
3.	B. Sc. (Home Science)	-	Yes	Yes
4.	M. Sc.	-	-	-

#### 8. Number of Teaching posts:

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	Professor	-	-
2.	Associate Professor	-	-
3.	Assistant Professor		1

**9. Teaching Faculty: 2023-24**

<b>Sr. No.</b>	<b>Name of faculty</b>	<b>Qualification</b>	<b>Designation</b>	<b>Date of Appointment</b>	<b>No. of Years of Experience</b>
1.	Mrs. M. M. Deshpande	M. Sc., M.Phil	Professor & Head	16.11.1987	33years
2.	Dr. Manda Walokar	M. Sc., Ph.D.	CHB, Approved by RTMNU	2023-24	NA
3.	Ms. Ashwini Lambat	M. Sc., NET	CHB, Approved by RTMNU	2023-24	NA
4.	Ms. Avanti Chaphale	M. Sc., NET, SET	CHB, Approved by RTMNU	2023-24	NA
5.	Ms. Pradnya Bagalkote	M. Sc., SET	CHB, Approved by RTMNU	2023-24	NA
6.	Ms. Ankita Wankhede	M. Sc., NET	CHB, Approved by RTMNU	2023-24	NA
7.	Ms. Meghna Pandit	M. Sc., NET	CHB, Approved by RTMNU	2023-24	NA

**10. Number of academic support staff (technical) and administrative staff; sanctioned and filled:**

<b>2023-24</b>			
<b>Sr. No.</b>	<b>Name of Post</b>	<b>Sanctioned</b>	<b>Filled</b>
1.	Lab. Assistant	-	-
2.	Lab. Attendant	2	2

## **11. Number of activities organized: 2023-24**

- 1) Visit to Raan Bhaji Utsav on 21-027-2023 at PGTD Home Science, RTMNU
- 2) Discusson on various types of darts on 04-08-2023
- 3) Poster Competition On the occasion of World Breastfeeding Week 2023 on 06-08-2023
- 4) Identification of warp and weft yarn on 16-08-2023
- 5) Preparation of Room model (Bedroom, Hall) on 19-08-2023
- 6) BharadiGour Demonstration on 19-08-2023
- 7) Discuss on various types of darts on 04-08-2023
- 8) Demostartion of Nutrition Software with Home Science Students on 23-08-2023
- 9) Nutrition Snake and Ladder game to understand basics of Nutrition on 23-08-2023
- 10) Ceramic Workshop on 28-08-2023
- 11) Demonstration on dummy (dress form) on 28-08-2023
- 12) Discussion on Healthy caring practices (nutrition) on 30-08-2023
- 13) One day Seminar on the occasion of National Nutrition Month and International Millet Year 2023 on 01-09-2023
- 14) Presentation by students on Planning of Different Events- Event Management on 02-09-2023
- 15) NukkadNatak on the occasion of National Nutrition Month on 04-09-2023
- 16) Poster competition on the occasion of National Nutrition Month on 05-09-2023
- 17) Model Making based on Food Pyramid on 05-09-2023
- 18) India OPD visited department for the development of Nutrition Based Software on 08-09-2023
- 19) Poster Competition On the occasion of World Breastfeeding Week 2023 conducted on 06-08-2023
- 20) Visit to Raan Bhaji Utsav at PGTD Home Science, RTMNU on 19-09-2023
- 21) Activity on Identification of man-made fibre and natural fibre on 03-10-2023
- 22) Demonstration of Diet of Pregnant Woman on 31-10-2023
- 23) Demonstration of Superfoods during Pregnancy on 01-11-2023
- 24) Visit in Hotel Centre Point Ramdaspath, Nagpur on 02-11-2023
- 25) Dr. Manda Walokar, Ms. Avanti Chaphale and Mrs. Prdanya Bagalkote Participated in 05 days Faculty Development Programme (FDPA) on “Women in Leadership” organized by Maharashtra State Faculty Development Academy Pune, Punashyashlok Ahilybai Holkar Solapur University, Solapur with RTMNU.
- 26) 11 Students completed internship under the able guidance of Dr. Amit Samarth and Ms. Avanti Chaphale in Event Management Internship / Filed Training for “MOIL Tigerman Triathlon Expo and Competition 2024” in Feb 2024
- 27) Dr. Manda Walokar, Ms. Avanti Chaphale , Mrs. Prdanya Bagalkote and Ms. Ankita Wankhede Attended National Conference on Green Earth - Clean



Earth at LAD College, Nagpur on 10-02-2024

28) Activity of Refurbishing Furniture with use of Wallpaper (Vinyl sheet) conducted by Ms. Avanti Chaphale on 14-02-2024.

**12. Infrastructural Facilities:**

**a) Laboratory:**

Spacious & well-furnished laboratory with seating Arrangement for lectures

**b) Library:**

The are separate departmental library books, journals, list of e-books,downloaded text books as reference material etc.

**c) ICT facilities:**

Computer with internet facilities, Wi-Fi, over head projector, etc. also, use of personal laptops and mobiles as ICT tools in teaching learning practices

**d) E-books:**

List of free downloaded e-books are available with the department useful for UG, and even in the research as reference books.

**e) Staff rooms:**

Well-furnished and well lighted &ventilated sseparate seating arrangement for teaching and non-teaching staff which includes HOD Cabin, Teachers room with seating arrangement for technical staff of the department.

**13. Online Teaching assistance:**

**a) Google meet: YES**

**b) Google forms: YES**

**c) Zoom platform: YES**

**d) Microsoft team: YES**

**e) YouTube channel& Website link if any: YES**

**f) Number of videos / lectures available on YouTube channel if any: Nil**

**14. Faculty Profile:**

**a) Manju M.Deshpande, Head of the Department**

**i) Research Papers Published: Nil**

**ii) Books Published/ Edited: Nil**

**iii) Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):Nil**

**iv) Seminars / Conferences / Workshops attended: Nil**

**v) FDP attended: Nil**

**vi) Awards/Recognitions received: Nil**

**b) Pradnya Bagalkote, CHB**

**i) Research Papers Published: 3**

**ii) Books Published/ Edited: Nil**

**iii) Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):Nil**

**iv) Seminars / Conferences / Workshops attended: 20**

**v) FDP attended:**

05 days Faculty Development Programme (FDPA) on “Women in Leadership” organized by Maharashtra State Faculty Development Academy Pune, Punashyashlok Ahilybai Holkar Solapur University, Solapur with RTMNU from 28-01-2024 to 01-02-2024.

**vi) Awards/Recognitions received: Nil**

**c) Avanti Chaphale, CHB**

**i) Research Papers Published: Nil**

**ii) Books Published/ Edited: Nil**

**iii) Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):Nil**

**iv) Seminars / Conferences / Workshops attended: 05**

**v) FDP attended:**

05 days Faculty Development Programme (FDPA) on “Women in Leadership” organized by Maharashtra State Faculty Development Academy Pune, Punashyashlok Ahilybai Holkar Solapur University, Solapur with RTMNU from 28-01-2024 to 01-02-2024.

**vi) Awards/Recognitions received: Nil**

**15. Students Achievements if any: Nil**

**16. Student Centric Research Projects if any: Nil**

**17. Student strength& Number of Students passed:**

Sr. No.	Class	2023-24		
		Total	Pass	Pass %
1	B.Sc. SEM- I	18	4	22.22%
2	B.Sc. SEM-II	18	3	20%
3	B.Sc. SEM-III	10	7	70%
4	B.Sc. SEM-IV	10	6	75%
5	B.Sc. SEM-V	25	15	68.18%
6	B.Sc. SEM-VI	22	16	76.19%

**Note: T=Total Strength; P=Number of Pass Students**

**18. Awards/Recognitions received by the students: Nil**

**19. Teaching methods adopted to improve student learning:**

- Google Survey
- Observation Method
- PPT's prepared by students
- Visits for experiential Learning
- Assignments & Work Book Preparation mentioned in syllabus
- Learning by Participating
- Model Making
- Activity /Board Game Making
- Interactive Learning in the Class room =role play activity, discussion, class room quiz, preparing models, creative topic wise assignments.

**20. Participation in Institutional Social Responsibility (ISR) and Extension activities**

- Making of Compost
- Motivated to work as Volunteer in activities in Collaboration with NSI
- Participating in activities in association with Rotaract club of college
- Nukkad Natak on the occasion of National Nutrition Month

**21. Creativity & Innovations if any:**

- Designing of Bags, Table Cloth and Chair Covers- with use of stencil and block printing designs incorporating the Gond Art and Warli Art forms.

**22. SWOC analysis of the department and Future plans:**

**Strength:**

- Result
- Internship Programme
- Certificate Courses
- Progressive Attitude & Techno Savvy CHB Faculty

**24. Weaknesses: Faculty Strength**

- Research mind in Student

**25. Opportunity:**

- Skill Based Certificate courses can be Arranged for Students Strengthening Student Based Activities Internship at more Allied fields in Home Science

**26. Challenges:**

- Class Heterogeneity

- Placements of Students in Allied Branches in Home Science

**27. Future planning:**

- Students Learn through healthy Teacher –Student Relationship and shape up their Personality &Soft Skills
- Project on Environmental Consciousness &Concept of Go Green
- More of Student Centric Activities
- Academics &Extra Curricular Activities
- Avenues where knowledge of Home Science can be applied thereby Planning for Viable & Utility Wise Useful Certificate/short term courses in context of Employment or Entrepreneurship.

# Department of Mathematics

## Annual Report (2023-24)

1. **Name of the department** : Mathematics
2. **Year of Establishment** : 1968
3. **Names of Programmes/Courses offered** : **No. of Certificates Course's:01**  
(Certificate, UG, PG, M.Phil., Ph.D.,  
Integrated Masters; Integrated., etc.) **UG: B. Sc.**  
**PG: M. Sc. (Mathematics)**
4. **Names of Interdisciplinary courses and the departments/units involved**
  - i) Physics, Statistics, Mathematics (PSM)
  - ii) Physics, Electronics, Mathematics (PME)
  - iii) Physics, Chemistry, Mathematics (PCM)
  - iv) Physics, Computer Science, Mathematics (PCoM)
  - v) Computer Science, Statistics, Mathematics (SCoM)
  - vi) Computer Science, Electronics, Mathematics (ECoM)
5. **Names of Certificate Courses if any:**
  - i) Certificate Course in Vedic Mathematics
6. **Collaborations / MoUs if any:** Nil
7. **Programme wise Annual/semester/choice-based credit system:**

Sr. No.	Name of the Courses	Annual	Semester	CBCS
1.	B. Sc	-	Yes	-
2.	M. Sc. (Mathematics)	-	Yes	Yes
3.	Certificate Courses	-	-	Yes

### 8. Number of Teaching posts:

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	Professor	-	-
2.	Associate Professor	-	-
3.	Assistant Professor	02	01

### 9. Teaching Faculty:

Sr. No.	Name of faculty	Qualification	Designation	Date of Appointment	No. of Years of Experience
1.	Dr. N. P. Gaikwad	M. Sc., M.Phil., Ph.D.	Associate Professor	09.02.2007	16 years 6 months
2.	Mr. Roshan Thakre	M. Sc., SET, NET	Assistant Professor (Non-grant), Approved by RTMNU	14.01.2020	3 years 6Months
3	Mr. Uttam Matare	M. Sc., SET	CHB Lecturer Approved by RTMNU	10.08.2023	6 Month
4.	Ms. Anuja Dhanagare	M. Sc., SET	CHB Lecturer Approved by RTMNU	10.08.2023	6 Month
5.	Ms. Pranita Kalambe	M. Sc., SET	CHB Lecturer Approved by RTMNU	10.08.2023	6 Month

**10. Number of academic support staff(technical) and administrative staff; sanctioned and filled:**

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	Lab. Assistant	-	-
2.	Lab. Attendant	-	-

**11. Number of activities organized: Nil**

**12. Infrastructural Facilities:**

**a) Classrooms: 02**

i) Separate classrooms for M. Sc. with the capacity of 30 students.

**b) Staff room: 01**

i) Well-furnished staff room for the teachers and a separate room for the Head of the department.

**c) Library: Nil**

**d) ICT Facilities:** Computer, Printer, personal laptop, mobile, etc.

**e) E-books: Nil**

**13. Online Teaching assistance:**

**a) Google meet: Yes**

**b) Google forms: Yes**

**c) Zoom platform: Yes**

- d) **Microsoft team:** Yes
- e) **YouTube channel link:** No
- f) **Number of videos / lectures available on YouTube channel:** Nil

**14. Faculty Profile:**

a) **Dr. N. P. Gaikwad**, Assistant Professor & Head of the Department

i) **Research Papers Published:**

1. Gaikwad, N. P. (2023). Bianchi Type I Magnetized Dark Energy Cosmological Model in Bimetric Theory of Gravitation. *International Journal Of Mathematics And Computer Research*, 11(9),3708-3712.  
<https://doi.org/10.47191/ijmcr/v11i9.01>(ISSN: 2320-7167).
2. NP Gaikwad. **LRS Bianchi type II string magnetized barotropic perfect fluid cosmological model in Rosen's biometric theory of gravitation.** Int. J. Phys. Math. 2023;5(2):09-12. DOI: [10.33545/26648636.2023.v5.i2a.56](https://doi.org/10.33545/26648636.2023.v5.i2a.56) (ISSN: 2664-8644).
3. N. P. Gaikwad and R. K. Thakre **Matter Bounce Scenario with Bianchi type I space time in f (R, T) gravity**, Vol.-14, issue-9, Sept-2023. (ISSN: 2229-5046).

ii) **Books Chapter Published/ Edited:** Nil

iii) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):** Nil

iv) **Guest Lectures Delivered:** Nil

v) **Seminars / Conferences / Workshops attended:** 01

**Presented (Oral) research paper** entitled "LRS Bianchi Type II Magnetized String Cosmological Model with Bulk Viscous Fluid in Rosen's Bimetric Gravity" at **108<sup>th</sup> Indian Science Congress** on January 3-7, 2023.

vi) **FDP attended:** Nil

vii) **Awards/Recognitions received:** Nil

b) **Mr. Roshan Thakre**, Assistant Professor (Non-Grant), approved by RTM Nagpur University

i) **Research Papers Published: 01**

N. P. Gaikwad and **R. K. Thakre Matter Bounce Scenario with Bianchi type I space time in f (R, T) gravity**, Vol.-14, issue-9, Sept-2023. (ISSN: 2229-5046).

ii) **Books Published/ Edited:** Nil

iii) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):** Nil

iv) **Guest Lectures delivered:** Nil

v) **Seminars / Conferences / Workshops attended:** Nil

vi) **FDP attended:** Nil

vii) **Awards/Recognitions received:** Nil

**15. Students Achievements if any:** Nil

**16. Student Research Projects if any:** Nil

**17. Diversity of Students:**

i) **Total number of students enrolled:** 345

- ii) Number of Students from home state:342
- iii) Number of Students from other state:03

**18. Student strength &Result Analysis:**

Name of the Semester	Enrolled Students	Appeared Students	Pass students	Pass percentage
B. Sc. Sem.-I	96	96	46	47.92
B. Sc. Sem.-II	96	96	19	19.79
B. Sc. Sem.-III	101	101	54	53.47
B. Sc. Sem.-IV	101	101	21	20.79
B. Sc. Sem.-V	130	130	78	60.00
B. Sc. Sem.-VI	130	130	91	70.00
M.Sc. Sem-I	13	12	07	58.33
M.Sc. Sem- II	13	12	06	50.00
M.Sc. Sem-III	05	05	03	60.00
M.Sc. Sem IV	05	05	04	80.00

**19. Student progression:**

Student progression	Against % enrolled
UG to PG	20-30
PG to M. Phil.	Nil
PG to Ph.D.	Nil
Ph.D.to Post-Doctoral	NA
Employed	Nil
<ul style="list-style-type: none"> <li>➤ Campuselection</li> <li>➤ Other than campus recruitment</li> </ul>	
Entrepreneurship /Self-employment	Nil

**20. Awards/ Recognitions received by the students: Nil**

**21. Teaching methods adopted to improve student learning: Nil**

**22. Participation in Institutional Social Responsibility (ISR) and Extension activities: Nil**

**23. Creativity & Innovations if any: Nil**

**24. SWOC analysis of the department and Future plans:**

**a) Strength:**

- i) Highly Qualified and Dedicated Teaching Staff
- ii) Extensive Student-Teacher Interaction.
- iii) Full-time time years Post graduate affiliated to RTM Nagpur University, Nagpur



- b) Weaknesses:**
  - i) Industry views are yet to be introduced.
  - ii) Lack of Teaching staff
- c) Opportunities:**
  - i) Scope to do Masters in Industrial Mathematics having high jobs.
  - ii) Post-Graduation in Mathematics opens up opportunities in the teaching field.
- d) Challenges:**
  - i) Children from low socio-economic backgrounds might not be sufficiently exposed to the necessary resources and experiences for learning mathematics concepts.
- e) Future planning:**
  - i) Improve upon the student's results profile.
  - ii) Intensive Student-Teacher interaction.
  - iii) Publishing research papers in UGC approved journals.
  - iv) To obtain Minor Research Project for the Department.
  - v) More participation of the Department in Extension activities.
  - vi) To arrange guest lectures of eminent Mathematicians for students.
  - vii) To enhance the Research activities of the Department.

## DEPARTMENT OF MICROBIOLOGY

### Annual Report (2023-2024)

- Name of the department** Department of Microbiology
- Year of Establishment** 1<sup>st</sup> August 1986
- Names of Programmes/Courses offered (Certificate, UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)**  
**Diploma Course/s:** Nil  
**Certificates Course/s:** Nil  
**UG:** Bachelor of Science (BSc)  
**PG:** Nil
- Names of Interdisciplinary courses and the departments / units involved:**
  - Chemistry Zoology Microbiology (CZM)
  - Chemistry Botany Microbiology (CBM)
- Names of Certificate Courses if any:** Nil
- Collaborations / MoUs if any:** Nil
- Programme-wise Annual/semester/choice-based credit system:**

Sr. No.	Name of the Courses	Annual	Semester	CBCS
1.	Certificate Course/s	-	-	-
2.	Diploma Course	-	-	-
3.	B. Sc.	-	Semester	-
4.	M. Sc.	-	-	-

#### 8. Number of Teaching posts:

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	Professor	-	-
2.	Associate Professor	02	00
3.	Assistant Professor	02	00

#### 9. Teaching Faculty:

2023-24

Sr. No.	Name of faculty	Qualification	Designation	Date of Appointment	No.ofYears of Experience
1.	Dr. Vaishali Pimple	MSc. B.Ed. NET PhD	Assistant Professor- CHB	10-07-2023	16 Years
2.	Miss.Abha Manapure	MSc. PET SET	Assistant Professor-CHB	10-07-2023	12 Years
3.	Dr. Pratiksha Pohekar	MSc. PhD	Assistant Professor-CHB	10-07-2023	7 Years

4.	Mrs. Sonali Kumarwar	MSc. SET	Assistant Professor-CHB	10-07-2023	17 Years
5.	Miss. Muskan Harde	MSc. SET	Assistant Professor-CHB	10-07-2023	1 Year
6.	Miss. Neha Hatwar	MSc. NET, GATE	Assistant Professor-CHB	10-07-2023	1 Year

**10. Number of Academic support staff (technical) and administrative staff; sanctioned and filled:**

2023-24			
Sr. No.	Name of Post	Sanctioned	Filled
1.	Lab. Assistant	2	1
2.	Lab. Attendant	2	1

**11. Number of activities organized: 2023-24**

1. Slogan Making Activity on Epidemiology on 13<sup>th</sup> October 2023.
2. Quiz Competition for BSc SEM I Students on 3<sup>rd</sup> November 2024.
3. Sticky Note Game on Gram staining Technique on 3<sup>rd</sup> Nov 2023.
4. Microtoons Making Activity on 3<sup>rd</sup> November 2023.
5. Google form MCQ Quiz based on Semester V, Unit I Paper 3 on 7<sup>th</sup> November 2023.
6. Poster Making Activity on “Microbial Diseases of Human Body on 13<sup>th</sup> November 2023
7. Poster Making on Microscopy on 3<sup>rd</sup> March 2024.
8. 6. “Molecular Biology Fun-toons” making Activity for BSc SEM IV students on 22<sup>nd</sup> April 2024.
9. Alumni Visit to the department on 30<sup>th</sup> December 2023.
10. Microbiolypiad contest for students of BSc Semester II, IV & VI on date 17<sup>th</sup> Jan 2024.
11. Agar Art Activity for students of BSc Semester I, III, V on 4<sup>th</sup> Nov, 2023.
12. 11. Power Point presentation competition for students of Semester V on date 23<sup>rd</sup> Sept. 2023.
13. Inauguration of Microbiology Society of India students unit & Fermented Food Fest on 6<sup>th</sup> February 2024.

**12. Infrastructural Facilities:**

**a) Laboratory:**

- i) Spacious & well-furnished laboratory with 25 seating capacity, well equipped with the instruments and equipment like, Bacteriological Incubators, cooling centrifuge, autoclave machines, refrigerators, laminar air flow system microscopes with 100X objectives, and Micrometric devices, spectrophotometer, Antibiotic disc dispenser, colorimeter, serological water bath, water distillation assembly, Electrophoretic Assembly, & SDS PAGE etc.

**b) Library:**

The departmental library has reference books, journals & books donated by

Faculty & Alumni.

**c) ICT facilities:**

i) Computer with internet access, LCD projector, etc. For online teaching, faculty uses personal laptops and mobiles as ICT tools.

**d) E-books:** Free downloaded e-books are available with the department useful for UG students.

**e) Staff rooms:**

i) Well-furnished staff rooms for teaching and non-teaching staff members.

**13. Online Teaching assistance:**

**a) Google meet: Yes**

**b) Google forms: Yes**

**c) Zoom platform: Yes**

**d) Microsoft team: Nil**

**e) YouTube channel & Website link if any:**

**f) Number of videos / lectures available on YouTube channel if any: Nil**

**14. Faculty Profile:**

**1. Name: -Dr. Vaishali Pimple**

**i) Research Papers**

1. Review Article on Green Synthesis of Nanoparticles & Its Applications. Yougato; Vol 76 No 1, (2024) (Web of Science Indexed Journal)

2. Mineral Analysis of Pithocellium from Fresh Arils of *Pithocellobium dulce* Peer RTMNUReviewed and Referred Journal: ISSN 09726330 Page No. 135-138

3. Evaluation of Bactericidal Efficacy of Ethereal oil Nano emulsion against Clinical isolates of *E. coli*. RTMNU: Reviewed and Referred Journal: ISSN 09726330 Page No.293-302

**ii) Books Published/ Edited: Nil**

**iii) Minor / Major Research Project (Sanctioned / Ongoing/ Submitted): Nil**

**iv) Guest Lectures Delivered: Nil**

**v) Seminars / Conferences / Workshops attended:**

1. Attended Three - Day Online Workshop on National Education Policy 2020: Challenges and Opportunities 29<sup>th</sup> To 31<sup>st</sup> May 2024. conducted by Dharampeth M.P. Deo Memorial Science College Nagpur, J.M. Patel Arts Commerce and Science College, Bhandara and six other colleges affiliated to RTM Nagpur University.

**vi) FDP attended:**

1. Attended two weeks National Level FDP on Flipped Classroom Teaching Tools 12/4/2024 to 26/04/2024 organized by ESSGEE DIGISKILLS.

**vii) Awards/Recognitions received: Nil**

**2. Name: - Mrs. Abha Khedikar**

**i) Research Papers**

1. Published Research paper "Evaluation of Ocimum sanctum's leaves extract for Antibacterial Effect" in **Web of Science International journal** on dated 02/06/2024.

**ii) Book Published/Edited: Nil**

**iii) Minor / Major Research Project (Sanctioned / Ongoing/ Submitted): Nil**

**iv) Guest Lectures Delivered: Nil**

**v) Seminars / Conferences / Workshops attended:**

1. Attended Three - Day Online Workshop on **National Education Policy 2020: Challenges and Opportunities** 29<sup>th</sup> To 31<sup>st</sup> May 2024. conducted by Dharampeth M. P. Deo Memorial Science College Nagpur, J. M. Patel Arts Commerce and Science College, Bhandara and six other colleges affiliated to RTM Nagpur University.
2. Successfully completed 5-day International Workshop on **Research Manuscript Drafting and Patent Filing Process** (WOMAP-2024) conducted by Eudoxia Research Centre India from 18<sup>th</sup> April 2025 to 25<sup>th</sup> April 2025.

**vi) FDP attended:**

1. Successfully Completed International FDP on "**Research Designs, Mechanics of Manuscript Drafting & Free Publication Process**", dated 2nd -11th Nov 2023, organized by Asian International Research Council of Eudoxia.
2. FDP on Research Manuscript Drafting and Patent Filing Process from 03/04/2024 to 12/04/2024.

**vii) Awards/Recognitions received:**

1. Conferred with "**Young Teacher Award (Maharashtra State)**", by Microbiologists Society India during the academic session 2023-24.
2. Granted Indian Patent on "**Device for Bio fertilizer Production**" – dated 26/03/2024 (Design no. 411619-001).
3. Granted **UK Patent** on "**Fourier Transform Infrared Spectrophotometer for Analysis of Bioactive Components of Medicinal Plants.**" On 14<sup>th</sup> March 2023; (Design Number : 6351435).

**15. Students Achievements if any:**

1. DOLLY WANJARI BSC Semester III CZM Published Review Article in on Green Synthesis of Nanoparticles & Its Applications. Yougato; Vol 76 No 1 (2024) (Web of Science Indexed Journal)
2. Eight students of the department along with Junior college faculty Mrs. Priyanka Ganorkar performed 'POWADA' at collector's office Nagpur on the occasion of National Voters Day (25/01/2024). These students were felicitated by Collector Nagpur for spreading awareness in the Society about importance of Voting.
3. Names of the Powada Participants: Class BSc Sem VI CZM
  1. Jyoti Sharma
  2. Siddhart Hirkane
  3. Gargi Hadke
  4. Prajwal Bhoyar
  5. Sahil Singh
  6. Prajкта Pawar
  7. Vedant Baxy
  8. Vaishnavi Bedade

**16. Student Centric Research Projects if any: Nil**

**17. Student strength& Number of Students passed:**

Sr. No.	Class	2023-24		
		T	P	Pass %
1	B.Sc. SEM- I	55	27	49.09%
2	B.Sc. SEM-II	52	21	40.38%
3	B.Sc. SEM-III	40	27	67.50%
4	B.Sc. SEM-IV	40	21	52.50%
5	B.Sc. SEM-V	62	47	75.80%
6	B.Sc. SEM-VI	60	49	81.66%

Note: T=Total Strength; P=Number of Pass Students

**18. Awards/Recognitions received by the students:**

1. Nandini Hadge Student of BSc Semester VI (22-23) received “Best Student Award from Microbiologists Society of India.
2. Nandini Hadge Student of BSc Semester VI (22-23) received “Best Student Award from Nagpur University Microbiology Teacher Association, Nagpur.

**19. Teaching methods adopted to improve student learning:**

- i) Regular Assignments were given to students to-
  - a. To acquaint students with subject.
  - b. To develop writing and presentation skills.
  - c. Revisions of topics taught in classroom.
  - d. To develop concepts on different topics
- ii) Extra classes were engaged for the students wherever necessary
- iii) Unit test and End semester Exams were conducted.
- iv) Practical manuals were prepared by students to improve their computer skills.

**20. Participation in Institutional Social Responsibility (ISR) and Extension activities.**

- i) Students of the Semester VI Participated and performed ‘Powada’ at Collectors office Nagpur on the occasion of National Voters Day 25<sup>th</sup> January 2025.
- ii) Students Volunteered and managed the event of Alumni Meet organized by P.G.T, D. of Microbiology on 24<sup>th</sup> January 2024 and rendered their services.

**21. Creativity & Innovations if any:**

- i) Dr. Vaishali V. Pimple Faculty of the department has been Granted U.K. Patent on- “ Portable UV based Reusable Tourniquet Sterilizer” on Date 18 June 2024. (Design Number :6371073)
- ii) Faculty of the department Miss Abha Manapure has been granted two patents: Granted Indian Patenton “**Device for Bio fertilizer Production**” – dated 26/03/2024 (Design no. 411619-001).
- iii) Granted UK Design Patent on “**Fourier Transform Infrared Spectrophotometer for Analysis of Bioactive Components of Medicinal Plants.**” On 14<sup>th</sup> March 2023;(Design Number: 6351435).

**22. SWOC analysis of the department and Future plans:**

**a) Strength:**

1. Faculty dynamics and interactions within the department is very good.

2. Senior and experienced teaching and non-teaching staff known for its efficiency.
3. Well-equipped laboratory with adequate instruments.
4. Globally placed alumni.
5. Rich regional identity.
6. Faculty-students dynamics excellent.
7. Departmental library has good collection of books.
8. Consistently good results of the department.

**b) Weaknesses:**

1. Limited access to the resources.
2. No permanent faculties for teaching.
3. Less flexibility within the course.
4. Large population of students coming from mofussil area face problems in English conversation

**c) Opportunity:**

1. Ample scope to develop linkages or MOUs with various industries like Pharma,
2. Food Beverages & Milk, Health care sector, Bio fertilizer plant etc.
3. Various job opportunities for students to work in Govt. and Public sector or become an entrepreneur.

**d) Challenges:**

1. Limited course flexibility, unable to attract students from other states and overseas.
2. Many a times teachers find it challenging to acquaint the topic in English to the Students.

**e) Future planning:**

1. Increase involvement of alumni for students' placements.
2. To apply for research projects.

## DEPARTMENT OF PHYSICS

### Annual Report (2023-2024)

- Name of the department** : Department of Physics
- Year of Establishment** : 1968
- Names of Programme/Courses offered** : **Degree Course/s:UG**  
(Certificate, UG, PG, M.Phil., Ph.D., Integrated **Certificates Course/s:NA**  
Masters; Integrated Ph.D., etc.) **PG:NA**
- Names of Interdisciplinary courses and the departments/units involved:**
  - PCM (Physics, Chemistry, Mathematics)
  - PEM (Physics, Electronics, Mathematics)
  - PCoM (Physics, Computer Science, Mathematics)
  - PSM (Physics, Statistics, Mathematics)
  - B.Sc. Home Science (I,II,III,IV Sem)
- Names of Certificate Courses if any:** NA
- Collaborations / MoUs if any:** Minex metallurgical company Pvt. Ltd. Nimji, Nagpur
- Programme-wise Annual/semester/choice-based credit system:**

Sr. No.	Name of the Courses	Annual	Semester	CBCS
1.	Certificate Course/s	NA	NA	NA
2.	Diploma Course	NA	NA	NA
3.	B. Sc.	NA	I-VI	yes
4.	M. Sc.	NA	NA	NA

#### 8. Number of Teaching posts:

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	Professor	-	-
2.	Associate Professor	01	01
3.	Assistant Professor	5	0

#### 9. Teaching Faculty:

2023-24

Sr. No.	Name of faculty	Qualification	Designation	Date of Appointment	No. of Years of Experience
1.	Lt. Dr. Prashant Ambekar	M.Sc., M.Phil., Ph.D., PRCN	Associate Professor, Head and Associate NCC officer	16/06/2003	21



**10. Number of academic support staff (technical) and administrative staff; sanctioned and filled:**

<b>2023-24</b>			
<b>Sr. No.</b>	<b>Name of Post</b>	<b>Sanctioned</b>	<b>Filled</b>
1.	Lab. Assistant		
2.	Lab. Attendant	2	2

**11. Number of activities organized: 2023-24: -60**

**12. Infrastructural Facilities:**

- a) **Laboratory: 4**
- b) **Museum: NA**
- c) **Library: yes**
- d) **ICT facilities: yes**
- e) **E-books: yes**
- f) **Staff rooms: yes**

**13. Online Teaching assistance:**

- a) **Google meet: yes**
- b) **Google forms: yes**
- c) **Zoom platform: yes**
- d) **Microsoft team: NA**
- e) **YouTube channel & Website link if any: yes**
- f) **Number of videos / lectures available on YouTube channel if any: 13**

**14. Faculty Profile:**

**Name: - Lt. Dr. Prashant Ambekar**

- i) **Research Papers: 01**
- ii) **Books Published/ Edited: 01**
- iii) **Patent Published/ Awarded:01**
- iv) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted):NA**
- v) **Guest Lectures Delivered:**
- vi) **Seminars / Conferences / Workshops attended: 01**
- vii) **FDP attended: Awards/Recognitions received:01**

**15. Students Achievements if any: NA**

**16. Student Centric Research Projects if any: NA**

**17. Student strength & Number of Students passed:**

<b>Sr. No.</b>	<b>Class</b>	<b>2023-24</b>		
		<b>T</b>	<b>P</b>	<b>Pass %</b>
<b>1</b>	<b>B.Sc. SEM- I</b>	<b>59</b>	<b>27</b>	<b>45.7</b>
<b>2</b>	<b>B.Sc. SEM-II</b>	<b>76</b>	<b>4</b>	<b>5.26</b>

3	B.Sc. SEM-III	66	34	51.51
4	B.Sc. SEM-IV	86	27	31.39
5	B.Sc. SEM-V	81	56	69.1
6	B.Sc. SEM-VI	96	58	60.4

Note: T=Total Strength; P=Number of Pass Students

**18. Awards/Recognitions received by the students: NIL**

**19. Teaching methods adopted to improve student learning:**

Hands on Training and skill- based activities.

**20. Participation in Institutional Social Responsibility (ISR) and Extension activities:**

NSS and NCC.

**21. Creativity & Innovations if any:**

An Indian patent on “An In-Situ Surface Conductivity Measurement Device and Working Thereof” Date of Publication: 23/02/2024.

**22. SWOC analysis of the department and Future plans:**

- a) **Strength:** Hands on Training and skill-based activities
- b) **Weaknesses:** Less number of regular faculties and non-teaching staff.
- c) **Opportunity:** To developed new instruments. Physics related best practices can be adopted. To write a book based on NEP syllabus. Collaborative research.
- d) **Challenges:** less staff member, age old equipment
- e) **Future planning:** To start PG program. To develop a research lab. High quality research,

## DEPARTMENT OF STATISTICS

### Annual Report(2023-2024)

1. Name of the department : Department of Statistics
2. Year of Establishment : 1978
3. Names of Programmes / Courses offered : Degree Course/s:UG  
(Certificate, UG, PG, M.Phil., Ph.D., Integrated Certificates Course/s:NA  
Masters; Integrated Ph.D., etc.) PG:NA

#### 4. Names of Interdisciplinary courses and the departments/ units involved:

- (i) PSM (Physics, Statistics, Mathematics)
- (ii) SCOM(Statistics, Computer Science, Mathematics)

#### 5. Names of Certificate Courses if any: NA

#### 6. Collaborations / MoUs if any: Nil

#### 7. Programme-wise Annual/semester/choice-based credit system:

Sr. No.	Name of the Courses	Annual	Semester	CBCS
1.	Certificate Course/s	NA	NA	NA
2.	Diploma Course	NA	NA	NA
3.	B. Sc.	NA	I-VI	NA
4.	M. Sc.	NA	NA	NA

#### 8. Number of Teaching posts:

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	Professor	-	-
2.	Associate Professor	-	-
3.	Assistant Professor	02	00

#### 9. Teaching Faculty:

2023-24

Sr. No.	Name of faculty	Qualification	Designation	Date of Appointment	No.ofYears of Experience
1.	Nil	Nil	Nil	Nil	Nil

**10. Number of academic support staff (technical) and administrative staff; sanctioned and filled:**

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	Lab. Assistant	00	00
2.	Lab. Attendant	01	01

**11. Number of activities organized:2023-24: -24**

**12. Infrastructural Facilities:**

- a) **Laboratory: 01**
- b) **Museum: NA.**
- c) **Library:**The Departmental library has 22 books required for the syllabus of UG statistics. In addition to this the library has Statistical tables, Mathematical tables and the Biometrica table as well.
- d) **ICT facilities: Yes**
- e) **E-books:** The department has 14 e-books covering a variety of topics in Statistics.
- f) **Staff rooms: Yes**

**13. Online Teaching assistance:**

- a) **Google meet: yes**
- b) **Google forms: yes**
- c) **Zoom platform: yes**
- d) **Microsoft team: NA**
- e) **YouTube channel& Website link if any: NA**
- f) **Number of videos / lectures available on YouTube channel if any: NA**

**14. Faculty Profile: Nil**

**15. Students Achievements if any: Nil**

**16. Student Centric Research Projects if any:NA**

**17. Student strength& Number of Students passed:**

Sr. No.	Class	2023-24		
		T	P	Pass %
1	B.Sc. SEM- I	32	15	46.87
2	B.Sc. SEM-II	29	02	6.8
3	B.Sc. SEM-III	32	14	43.75
4	B.Sc. SEM-IV	31	12	38.7
5	B.Sc. SEM-V	20	11	55
6	B.Sc. SEM-VI	19	12	63.15

Note: T=Total Strength; P=Number of Pass Students

**18. Awards/Recognitions received by the students: NIL**

**19. Teaching methods adopted to improve student learning:**

Hands on Training and Activity based learning.

**20. Participation in Institutional Social Responsibility (ISR) and Extension activities:**

Nil

**21. Creativity & Innovations if any: Nil**

**22. SWOC analysis of the department and Future plans:**

a) **Strength:**

Hands on Training and skill-based activities

b) **Weaknesses:**

Less number of regular faculties and non-teaching staff.

c) **Opportunity:**

To develop innovative learning methods to engage students more effectively. Statistics related best practices can be adopted. To write a book based on NEP syllabus. Interdisciplinary and Collaborative research.

d) **Challenges:**

less staff member, computer facility less adequate.

e) **Future planning:**

To start PG program. To develop a research lab. High quality research. To run a certificate course related to Statistics.

## DEPARTMENT OF ZOOLOGY

### Annual Report (2023-2024)

1. Name of the department : Zoology
2. Year of Establishment : 1970
3. Names of Programmes/Courses offered  
(Certificate, UG, PG, M.Phil., Ph.D.,  
Integrated Masters; Integrated Ph.D., etc.) NA:
  - i) Chemistry Botany Zoology (CBZ)
  - ii) Chemistry Zoology Microbiology (CZM)
  - iii) Applied Physiology for B. Sc. (Home Science), Sem.-III& IV
  - iv) Major Zoology B.Sc. I NEP

4. Names of Interdisciplinary courses and the departments/units involved: Nil

5. Names of Certificate Courses if any:

1. Vermicomposting and Vermiculture
2. Fresh Water fish culturing

6. Collaborations / MoUs if any: Nil

7. Programme-wise Annual/semester/choice-based credit system:

Sr. No.	Name of the Courses	Annual	Semester	CBCS
1.	Certificate Course/s	-	-	-
2.	Diploma Course	-	-	-
3.	B. Sc.	-	✓	✓
4.	M. Sc.	-	-	-

8. Number of Teaching posts:

Sr. No.	Name of Post	2023-24	
		Sanctioned	Filled
1.	Professor	04	04
2.	Associate Professor	-	-
3.	Assistant Professor	04	04

9. Teaching Faculty:

2023-24

Sr. No.	Name of faculty	Qualification	Designation	Date of Appointment	No.of Years of Experience
1.	Dr. Mrs. K.M. Paturkar	M.Sc. Ph.D.	Assistant Professor	7/02/2006	18 Yrs.

2.	Dr. K. T. Waghmare	M.Sc. Ph.D.	Assistant Professor	19/07/2023	8 Yrs.
3.	Dr. P.D. Khandelwal	M.Sc. Ph.D.	Assistant Professor	19/07/2023	4 Yrs.

**10. Number of academic support staff (technical) and administrative staff; sanctioned and filled:**

2023-24			
Sr. No.	Name of Post	Sanctioned	Filled
1.	Lab. Assistant	01	Nil
2.	Lab. Attendant	02	01

**11. Number of activities organized (2023-24): 12**

**12. Infrastructural Facilities:**

**a) Laboratory:**

- i) Spacious & well-furnished laboratory with 25 seating capacity, well equipped with the instruments and or equipment like, homogenizer centrifuge, autoclave, microtome Soxhlet apparatus microscopes (dissecting, monocular, binocular, compound, projector, etc.)

**b) Museum:**

- i) Well maintained museum with rarespecimens of non -chordates and chordates dissected animals, life cycles, Alizarin preparations evolutionary models embryos and skeleton, loose bones etc.

**c) Library:**

- i) The separate departmental library with over text books, reference books journals, e-books, etc. In addition to the departmental library.

**d) ICT facilities:**

- i) Computer with internet facilities, Wi-Fi, projector, etc. also, use of personal laptops and mobiles as ICT tools in teaching learning practices

**e) E-books:**

- i) Free downloaded e-books are available with the department useful for UG, PG and even in the research as test and reference books.

**f) Staff rooms:**

- i) Well-furnished and Separate seating arrangement for teaching and non-teaching staff which includes HOD Cabin, Teachers room with seating arrangement for technical staff of the department.

**13. Online Teaching assistance:**

- a) **Google meet: No**  
b) **Google forms: No**  
c) **Zoom platform: No**  
d) **Microsoft team: No**  
e) **YouTube channel & Website link if any: Yes**  
f) **Number of videos / lectures available on YouTube channel if any:**

#### 14. Faculty Profile:

a) **Name: - Dr. Kirti M. Paturkar, Assistant Professor & Head of the Department**

i) **Research Papers: 02**

1. UGC care listed journal- **BIOINFOLET** Influence of butea Monosperma and moringa oleifera leaf extracts on reproductive hormones in male albino rats.
2. **International Journal of Life Sciences** Diversity of spider fauna from Ambazari lake Nagpur, Vidarbha region India.

ii) **Books Published/ Edited: Nil**

iii) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted): Nil**

iv) **Guest Lectures Delivered: Nil**

v) **Seminars / Conferences / Workshops attended: Nil**

vi) **FDP attended: Awards/Recognitions received: Nil**

b) **Dr. Puja Khandelwal:**

i) **Research Papers: 01**

**International Journal of Life Sciences** Diversity of spider fauna from Ambazari lake Nagpur, Vidarbha region India

ii) **Books Published/ Edited: Nil**

iii) **Minor / Major Research Project (Sanctioned / Ongoing/ Submitted): Nil**

iv) **Guest Lectures Delivered: Nil**

v) **Seminars / Conferences / Workshops attended: Nil**

vi) **FDP attended: Awards / Recognitions received: Nil**

15. **Students Achievements if any: Nil**

16. **Student Centric Research Projects if any: Nil**

17. **Student strength& Number of Students passed:**

Sr. No.	Class	2023-24		
		T	P	Pass %
1	B.Sc. SEM- I	66	36	60.00%
2	B.Sc. SEM-II	53	18	33.69%
3	B.Sc. SEM-III	51	27	52.94%
4	B.Sc. SEM-IV	47	26	55.31%
5	B.Sc. SEM-V	67	43	64.17%
6	B.Sc. SEM-VI	66	49	74.24%

Note: T=Total Strength; P=Number of Pass Students

18. **Awards/Recognitions received by the students: Nil**

19. **Teaching methods adopted to improve student learning:**

- i) Shared videos and YouTube links for better understanding.
- ii) Aptitude test organized for new entrants.



- iii) Special attention was given to slow learners.
- iv) Extra classes were engaged for the students wherever necessary
- v) Class test and unit test student's seminar
- vi) Internal assignments on full course paper
- vii) Revision of the syllabus at the end of session
- viii) Organized activities based on National education policy, motivated students for experiential learning.

## **20. Participation in Institutional Social Responsibility (ISR) and Extension activities**

- i) Free Sickle cell detection camp organized regularly for the new students.

## **21. Creativity & Innovations if any:**

## **22. SWOC analysis of the department and Future plans:**

### **a) Strength:**

- i) Qualified and experienced teaching staff
- ii) Well maintained museum with rare specimens.
- iii) Separate departmental library with rare reference books.
- iv) Well-equipped laboratory with ICT facility
- v) For running in campus environment friendly activities vermicomposting pits, fish culturing tank, artificial beehive and artificial bird nests are available.

### **b) Weaknesses:**

- i) Non-teaching staff crunch because of govt policies for faculty recruitments
- ii) Need to update the laboratory with advanced instruments / equipment as per the recent trends in research in the subject.

### **c) Opportunity:**

- i) The students have job options available in department of forest and taxonomic research institutes, central research laboratories in life sciences.
- ii) More avenues in the field of agricultural research and small-scale industries because of skill-based education in the subject like sericulture, apiculture, fish culture, aquaculture, vermicomposting.

### **d) Challenges:**

- i) Find difficult to maintain the museum and laboratory due to crunch of non-teaching staff & necessary equipment in the laboratory.
- ii) Skill-based education introduced in the subject need thorough update in laboratory instruments as per the experiments in the syllabi.

### **e) Future planning:**

- i) To apply and undertake the major research projects
- ii) To publish the research papers
- iii) To organize national conference and workshops in life sciences
- iv) To prepare activity based interesting and effective teaching modules.