

Shri Shivaji Education Society Amravati's
Science College, Congress Nagar, Nagpur

Internal Quality Assurance Cell

DEPARTMENT OF BOTANY

INTERNAL ACADEMIC AUDIT

2022-2023

1. A. Faculty Strength:

Faculty	Recruited	Vacant	Remarks
Regular	05		
CHB	01		
Ad-hoc	--		
Non-teaching	02	01	

B. Faculty profile

Name	Highest Qualification	Designation	Specialization	Teaching Experience
Prof.. R.N. Deshmukh	M.Phil. Ph.D	Professor and Head	Algae Cytogenetics	36
Prof. P.S.Tiwari	M.Phil. Ph.D	Professor	Aerobiology, plant Tissue Culture	25
Dr.R,H.Mahakhode	B.Ed. Ph.D	Assistant Professor	Cytomorphology Cytogenetics	12
Dr. R.P.Sonwalkar	M.Phil. Ph.D	Assistant Professor	Plant biodiversity	04
Dr.Mrs.Sharayu S.Deshmukh	M.Sc., M.Phil., Ph.D	Assistant Professor	Taxonomy of Angiosperms	04

2. Student's strength

Year	Group	Number of Students Admitted
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B.Sc. Semester I	CBM	33
	CBZ	57
	CBG	29
	Total	119
	CBM	27
B.Sc. Semester III	CBZ	46
	CBG	20
	Total	93
	CBM	29
	CBZ	44
B.Sc. Semester V	CBG	22
	Total	95
M.Sc.Semester I		
M.Sc.Semester III		
Ph.D.		
Value Added Program		

P. G. STUDENT INDUCTION PROGRAMME	Yes,No
ACADEMIC PLANNINGS	Yes,No
BRIDGE COURSE TAUGHT	Yes,No
REMEDIAL COURSE TAUGHT	Yes,No

3.Student Performance

A. Result Analysis (Winter 2022) UG & PG

Programme Name	Number of students who appeared in the final year examination	Number of students who passed in final year examination	Pass Percentage
B.Sc Semester- I	107	65	60.74%
B.Sc Semester- III	92	64	69.56%
B.Sc Semester- V	94	79	84.04%

B. Result Analysis (Summer 2023) UG & PG

Programme Name	Number of students who appeared in the final year examination	Number of students who passed in final year examination	Pass Percentage
B.Sc Semester- II	95	46	48.42%
B.Sc Semester- IV	90	70	77.77%
B.Sc Semester- VI	95	84	88.4%

C. Achievements

A- (Medals/Awards/Prizes at University level)

Sr.No.	Name of the Students	Class	Title
1	Ku. Ketki Sonkusare	B.Sc. Sem. VI	Phytorid Technology
2	Mr. Akshay Bhatkulkar	B.Sc. Sem.V	Gene Editing & its Uses

B- Merit Position of UG Students in RTMNU

Sr. No.	Name of the Students	Merit Position
1	Ku. Vinita Rajendra Tijare	5 th
2	Ku. Vrunda Vidyadhar Borkar	8 th

C- Merit Position of PG Students in RTMNU

Sr. No.	Name of the Students	Merit Position

4. Student's Progression:

No. of students enrolling in higher Education	Name of institution joined	Name of program admitted to
UG to PG - 03	<ul style="list-style-type: none"> • Institute of Science, Nagpur • Shivaji Science College, Nagpur • Shivaji Science College, Nagpur 	M.Sc Sem-I Botany
PG to Research	--	--
Placement	--	--
On-Campus	--	--
Off-Campus	--	--

(i) Students' publication in Conferences/ Journals:

Title of the Paper	Name of Author	Title of journal	Year of publication

(ii) Students' participation in Seminar/ Conferences:

Sr. No.	Name of Students	Conference type	Participation as
1.			
2.			
3.			

(iii) Students' ExtensionActivity/ Extracurricular activity

Sr. No.	Name of the activity	The number of students who Participated
	World Nature Conservation Day	28
	One day excursion to Bor Dam District Wardha	87
	One day workshop on "Nursery Techniques	99
	Project on "Hydroponics"	10
	Four days training program on Plant Tissue Culture technique	20
	Visited to Maharashtra State Seed Biotech Lab, Nagpur (MAHABEEJ)	20
	Workshop on "Extraction of Bioactive Compounds from plants	39
	Two days workshop on 'Mushroom Cultivation	20

(iv) Participation of Students in online/MOOCs courses/ NPTEL/ SWAYAM

Sr. No.	Name of the Students	MOOCs / NPTEL/ SWAYAM

5. Faculty

I. Research Paper Publications

A. Total Number of publications:

- i) International- 06
- ii) National - 01

B. Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self-citation
Nucleic Acids and Protein Content Changes in Seedlings of <i>Psoralea corylifolia</i> Induced by 2,4-Dichlorophenoxy Acetic Acid. Vol. 10 Issue 5 pp. 062-067.	R.N. Deshmukh	Journal of Emerging Technologies and Innovative Research https://www.jetir.org	April, 2023.			
Efficient evaluation of growth media with plant hormones on microporpagation of a medicative herb: bengal bean	Dr. P.S.Tiwari	European. Chemical. Bulletin. 2023, 12(Regular Issue 6), 355 - 359 ISSN 2063- 5346	May22	Scopus		
Emerging Effects Of Air Pollution on Leaf Properties of Some Plants Collected From Koradi Suburb of Nagpur.	Dr. P.S.Tiwari	InternationalResearch journal ofManagement Science&Technology ISSN 2250 -1959 (online) ISSN 2348 -9367 (Print) DOI:10.32804IIRJMST	April 23	UGC ID 47959 IRJMST		

Study of Folk-Culture, Biodiversity Sources and Conservation Practices in Sundarban Region (Wb), India. IJBAT Issue (X) Vol (III) 18-25.	R.H. Mahakhod e	International journal Of Researches in Biosciences, Agriculture and Technology www.jrbat.in	Sept. 2022			
Chemical Screening and Antioxidant Assay of Three Indian Ethnomedicinal Plants. Vol. 14, Issue, 04 (A), pp. 2955-2960. DOI: 10.24327/IJRSR	R.H. Mahakhod e	International Journal of Recent Scientific Research UGC Approved https://www.recentscientific.com	April, 2023.			
Nucleic Acids and Protein Content Changes in Seedlings of <i>Psoralea corylifolia</i> Induced by 2,4-Dichlorophenoxy Acetic Acid. Vol. 10 Issue 5 pp. 062-067.	R.H. Mahakhod e	Journal of Emerging Technologies and Innovative Research https://www.jetir.org	May 2023			
Phytochemical Screening And Evaluation of Fruit Parts of <i>Cucumis callosus</i> (Rottl.) Cogn For Mosquitocidal Activities.	Dr. R.P. Sonwalkar	UGC –CARE List group- I Impact Factor- 4.257 Journal of Management and Entrepreneurship	June 2022			
Phytochemical Composition & Gc- Ms Analysis	Dr. Mrs. S.S. .Deshmukh	A Double-Blind Peer Reviewed & Refereed Journal	June 2022			

And Essential Oil Properties Of <i>Anisomeles indica</i>						
GC-MS Analysis of <i>Leucas aspera</i> Medicinal Plant of Nagpur dist.	Dr.Mrs.S.S .Deshmukh	International Journal for Multidisciplinary Research 21 tjan 2023	Jan 2023			
Phytochemical & GC-MS Analysis of Aromatic Plant <i>Leonotis nepitifolia</i>	Dr.Mrs.S.S .Deshmukh	International Journal Of creative Researches thoughts (IGCRT) In	March-2023			
Properties of the Essential Oil, Chemical Composition & High Profile Thin Layer Chromatography Study Of <i>HyptisSuaveolens</i> Leaves From Nagpur Region (M.S.)	Dr.Mrs.S.S .Deshmukh	Vidyabharati International Interdisciplinary Research Journal	March-2023			

C. Faculty participation in conferences/seminars/workshops and symposia:

Name of the Faculty	Title of Conference/ Seminar/ workshop Attended	Period	Level International/ National/State /University /College	Whether Presented papers	Whether abst /paper publish Souvenir/Ab Book
Dr. R.N. Deshmukh	Science and Technology for Society ICSTS-2022	19 th & 20 th June 2022.	International	Yes	Yes
	108 th Indian Science Congress	5 th January 2023	National	As a Resource Person	--
	Recent trends in Multi-Disciplinary Research	14-15 January 2023.	International	Yes	Yes

Dr. P.S.Tiwari	Science and Technology for Society ICSTS-2022	19-20 Jtne,2022	International	Yes	Yes	
	Recent trends in Multidisciplinary Research.	14-15 January 2023	International	Yes	Yes	
	integrated Approach in S& T for sustainable future,	26-27 Feb,2022	International	Yes	Yes	
	Dr. R.H. Mahakhode	Adopting Green initiatives for Sustainability.	24-25 August 2022	International	Yes	Yes
	Recent advances in science, Techn, Agriculture, Humanities, information sciences.	19-24 may 2023	International	Yes	Yes	
	Science and Technology for Society ICSTS-2022	19 th & 20 th June 2022.	International	Yes	Yes	
	Functional Materials for Sustainable Development	10-12 October 2022.	National Symposium	Yes	Yes	
	Recent trends in Multi-Disciplinary Research	14-15 January 2023.	International	Yes	Yes	
	108 th Indian Science Congress	5 th January 2023	National	Yes	Yes	
Dr. R.P. Sonwalkar	Recent Trends In Multi-Disciplinary Research(ICRTMR-2023)	14-15 January 2023.	International	Yes	Yes	
Dr.Mrs.S.S. Deshmukh	Properties of the Essential Oil, Chemical Composition & High Profile Thin Layer Chromatography Study Of <i>HyptisSuaveolens</i> Leaves From Nagpur Region (M.S.)	24 th September 2022	international	Yes	Yes	

	Environment Impact Of Plants in Science	3 rd JAN to 7 th Jan 2023	National	yes	Yes
	Phytochemical Composition & Gc-Ms Analysis And Essential Oil Properties Of <i>Anisomeles indica</i>	14 th and 15 th Jan-2023	International conference	yes	Yes
	Topic –AYUSH: Universal Key to Lead Healthy Life	26 th April 2023	Rajarshee Shahu science College, Viral road, Chandur Rly, Dist. Amravati PIN-444904	As a Resource Person	
	In Inter –School Medicinal Plants Exhibition	20 th April 2023	H.K.M Urdu High School Warud, Dist. Amravati	As a Jury member	

D. Awards to Faculty members

Name of Teacher	Title of the Award	Title of Agency/ Conference	National / International
Prof. P.S.Tiwari	Academic Entrepreneurship Award- Biotechnology	Shri Paramhans education and research Academy. Regd. With the Govt. of NCT of Delhi & NITI AAYOG	National

6. Number of functional MoUs with institutions, other universities, industries, corporate houses, etc. during the year

The organization with which MoU is signed	Year of signing MoU	Duration	List the actual activities under each MOU year wise	Number of students/teachers who participated under MoUs

Department of Cosmetic Technology, Nikalas Mahila Mahavidyalaya, Nagpur	2023	5 years	workshop on “Extraction of Bioactive Compounds from plants”	39

7. Research funds sanctioned and received from various agencies, industries and other organizations

Nature of the Project	Duration	Name of funding Agency	Amount Sanctioned	Amount Received

8. Books Published

	Book		Book Edited
	Title	ISBN and Date	Chapter
Dr. P.S.Tiwari	Introduction To Botany- Taxonomy of Angiosperms	ISBN: 978-8 1- 19338-17 - 7, 2023	ISO:9001-2015, edited
Dr. R.H. Mahakhode	Strategies of nanotechnology as a defense system in plants. pp. 227- 248. DOI: https://doi.org/10.1016/B978-0-323-88535-5.00001-9	9780323885362 June 2022 Elsevier Publication	Chapter-01

9. Research Guidance by Faculty during the year

Name of the guide	Ph.D		
	Awarded	Submitted	Registered
Dr. R. H. Mahakhode	--	--	01

10. Generation of funds through internal and external sources such as donations, consultancy, self-financing courses and so on.

Name of the nongovernment funding agencies/ individuals/ self-financing courses /consultancy service.	Purpose of the Grant/Fund	Fund generated in rupees.

11. Alumni Engagement

a. Contributes significantly to the development of the institution through financial and other supports. Nil

12. Action Plan of the Department:

- To celebrate World Environment Day.
- To celebrate World Nature Conservation Day.
- To organize various Eco-friendly activities.
- To conduct workshop on Plant Propagation Techniques.
- Project on Hydroponics by students.
- To conduct workshop on Plant Tissue Culture
- To plan excursion tour
- To organize guest lectures
- To encourage the students in various curricular & Extra-curricular activities
- To organize workshop on Mushroom Cultivation under skill base course
- To encourage staff to participate in various National & International events.

13. Best Practices of the department:

- Green Activities – “Green Festive Celebration”.
- One Day Workshop On “Nursery Techniques”
- Students of Sem. VI from Botany dept. actively participated in the workshop on “Extraction of Bioactive Compounds from plants” at Nikalas Mahila Mahavidyalay, Nagpur.
- Students of Semester VI were visited to Maharashtra State Seed Biotech Lab, Nagpur (MAHABEEJ)
- Students Participated in the workshop on Mushroom Cultivation Techniques & Plant Tissue Culture technique and Hydroponics

14. SWOT Analysis:

Strength

- Qualified, Competent and Experienced Staff.
- Committed non- teaching staff.
- Disciplined and hard working students.
- Well furnished and equipped Department.
- Safe and secured environment for co-education
- Democratic functioning.
- Various options available with Botany subject.
- Skill base certificate course on Mushroom Cultivation.
- Self-finance certificate course on Plant Tissue Culture.
- Botanical society for students.
- Good results with distinction.
- Focus on emotional & mental health of the students through Teacher Mentor Scheme.
- Parent-teacher interaction is encouraged.
- Seminars, counseling, personality development, guest lectures and Awareness programs are regularly arranged.

Weakness

- High drop out ratio due to poor socio-economic status of the students.
- Lack of risk taking ability.
- Average students seek admission in the subject.
- Moderate employment opportunity.
- Slow economic and industrial growth of Nagpur region.
- Decline of students' academic interest after pandemic (Covid-19).

Opportunity

- Employment potential in Forest department, various scientific institution e.g, NEERI, Ankur Seeds, Mahyco, CICR, CCRI, MIHAN, NMC Nagpur
- Training and placement cell in college.
- Student faculty exchange programme.
- Seminars, workshop, conferences, inter collegiate competitions, science exhibition for overall development of the students.
- Visit to Scientific laboratories and various localities.
- Research guidance facility available to students.
- Inspire camp is regularly organized to motivate the students for basic sciences.
- Execution planning for NEP-2020.

Threats

- Cut-throat competition in higher education.
- Declining interest of the students in basic science subject.
- Poor response of students during online classes during pandemic period.
- Majority of the students are facing emotional & mental health problems.

- Mushrooming of professional courses.

Date:

Head of the Depart