



Shiksha Mandal's Bajaj College of Science, Wardha

(Formerly Jankidevi Bajaj College of Science)
Autonomous College - Affiliated to RTM Nagpur University

PROSPECTUS 2024-25



- **NAAC Accredited (Fourth Cycle)**
- **DST-FIST Supported**
- **RUSA, MoE (Govt. of India) Supported**
- **Institution's Innovation Council, MoE (Govt. of India)**

Our Vision:



To contribute in building a new India through well educated, socially conscious students with good values and make such education accessible to students of this region. This is the reason our parent organization Shiksha Mandal came into being in 1914. Its credo "A century of nationalistic, value-based, quality education" expresses this vision.

Our Mission :

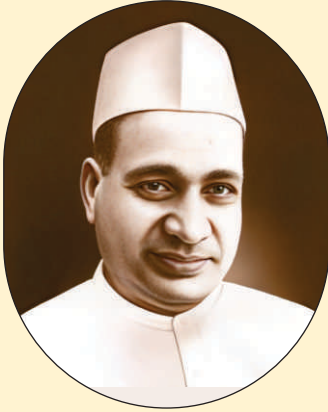


- To promote academic growth of students by running excellent graduate, post graduate and doctoral programs in Science.
- To develop human potential to its fullest extent and inculcate sound human values in students.

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Jamnalal Bajaj

(1889-1942)



Shri Jamnalal Bajaj exemplified the qualities as a visionary leader integral to India's freedom struggle and the Bajaj Group. A humanitarian, freedom fighter, and follower of Mahatma Gandhi, Jamnalalji actively contributed to various social causes and the nation's development. He played a key role in cow protection, upliftment of dalits, women's education, promotion of Hindi, Khadi, and village industries. Known for his strict ethical code, he embodied Gandhian principles in all aspects of life. Establishing Shiksha Mandal in 1912 for nation building, he influenced many in the freedom movement.

Jankidevi Bajaj

(1893 - 1979)



Mata Jankidevi Bajaj was a remarkable figure known for her dedication to her husband Jamnalalaji and her contributions to India's freedom struggle. She embraced Gandhian principles, advocating for swadeshi and khadi, while challenging orthodox customs like parda and untouchability. After her husband's passing, she devoted herself to causes like Go-seva and land donation for the landless. Her innovative ideas, such as koopdan, left a lasting impact. Recognized for her work, she received the Padma Vibhushan in 1956. Her legacy lives on through the award instituted in her name by the Jamnalal Bajaj Foundation, honoring women who work for the welfare of women and children. Her spirit continues to inspire dedication and commitment in all who hear her story.

Kamalnayan Bajaj

(1915 - 1972)



Kamalnayanji Bajaj took over as head of the group at 28 after his father's passing in 1942. He was a versatile individual, excelling as a thinker, politician, philanthropist, and entrepreneur. Influenced by Gandhian principles and guided by Acharya Vinoba Bhave, he returned to India after studying at the University of Cambridge to lead the family business. Kamalnayanji actively participated in India's freedom struggle and championed various social causes such as education, healthcare, and promoting Indian traditions. Serving as an MP from Wardha and later as Chairman of the company, he expanded the business into various sectors like manufacturing 2 & 3 wheelers, cement, electrical products, and ayurvedic goods. He also initiated a travel agency and played a key role in establishing Bajaj College of Science in Wardha, named after Mata Jankidevi Bajaj. His legacy lives on through his contributions to business, education, and social welfare.



Rajul Bajaj: An Extraordinary Life

Rahul ji Bajaj, a prominent figure on the horizon of Bajaj empire with a legacy spanning over 120 years, stands out as an iconic leader. Best recognized for his association with Bajaj Auto, a globally renowned motorcycle company, and Bajaj Finserv, a key player in the financial services sector, Rahul ji was a towering presence in both the Indian industry and public sphere. Renowned for his integrity, he held the prestigious position of president at the Confederation of Indian Industry on two occasions, served as a distinguished member of the Rajya Sabha (the upper house of Parliament), received the esteemed Padma Bhushan award, and was known for his bold and vocal stance on various public issues. His illustrious business journey, commencing in 1958 during India & its License Raj era, intricately weaves the narrative of India & its remarkable economic evolution across the decades. At the center of the development of the Bajaj Group of Industries and Shiksha Mandal in Wardha stands Rahul Bajaj, a stalwart leader and philanthropist whose efforts have left an enduring impact on both sectors.

Rahul ji, as a visionary leader, played a pivotal role in steering the growth and diversification of the Bajaj Group of Industries. His strategic acumen and unwavering commitment to excellence propelled the group to new heights of success across various industries. Moreover, his emphasis on ethical business practices and innovation set a benchmark for corporate governance in India.

In addition to his contributions to the industry, his philanthropic endeavors have been equally remarkable. His dedication to social causes, particularly in the field of education, shines through his efforts with Shiksha Mandal in Wardha. Through his philanthropic initiatives, he ensured that quality education was accessible to all, regardless of their financial background. Rahul ji's establishment of scholarships and financial aid programs have enabled countless deserving students to pursue their academic aspirations and realize their optimum potential. Rahul ji's role as a philanthropist goes beyond financial support; he has been a mentor and guide to many, inspiring them to give back to society and make a difference in the lives of others. His vision of a more equitable and inclusive society has guided both the Bajaj Group of Industries and Shiksha Mandal towards fostering a culture of giving and social responsibility.

As we reflect on the legacy of Rahul ji, we are reminded of his unwavering commitment to excellence, integrity, and service to society. His efforts as a philanthropist have not only transformed lives but have also set a shining example for future generations to follow. It is through his leadership and generosity that the Bajaj Group of Industries and Shiksha Mandal continue to thrive as ideals of progress and social change.

PARENT ORGANIZATION: SHIKSHA MANDAL

Shiksha Mandal, a century-old institution in Wardha, was founded by Shri Jamnalal Bajaj and played a significant role in the freedom struggle alongside Gandhiji. Over the years, it expanded from a school in 1919 to offering higher education, including Commerce, Agriculture, Engineering, and Science colleges. The institution, led by members of the Bajaj Family like Shri Rahul Bajaj, focuses on providing quality education with nationalistic values and integrity. It ensures that no deserving student is denied admission due to financial constraints and offers scholarships to support them. With English as the primary medium of instruction, Shiksha Mandal also offers sections in Hindi and Marathi in its Commerce Colleges. The institution has received accolades for its excellence, including UGC recognition and NAAC accreditation for its colleges. It has a strong focus on extracurricular activities, sports, and community development initiatives. The institution has a history of producing successful alumni like Shri Madhukar Chaudhary, Shri Harish Salve, and Honorable minister Shri Nitin Gadkari. Management was honored with the "Ideal Educational Institution Award 2014-2015" from Rashtrasant Tukadoji Maharaj Nagpur University Nagpur.



Shri. Shekhar Bajaj
President
Shiksha Mandal

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Colleges Run by Shiksha Mandal

- ▶ **G. S. College of Commerce, Wardha (Autonomous)**
- ▶ **Bajaj College of Science, Wardha (Autonomous)**
- ▶ **G. S. College of Commerce & Economics, Nagpur (Autonomous)**
- ▶ **Shrikrishnadas Jajoo Grameen Seva Mahavidyalaya, Wardha**
- ▶ **Department of Management Sciences and Research, Nagpur**
- ▶ **Department of Advanced Management Studies, Wardha**
- ▶ **Ramkrishna Bajaj College of Agriculture, Wardha**
- ▶ **Acharya Shrimannarayan Polytechnic, Wardha**
- ▶ **Bajaj Institute of Technology, Wardha**

Sister Associates

- ▶ **Gandhi Gyan Mandir's Bajaj Science Education Center, Wardha**
- ▶ **Jamnalal Bajaj Seva Trust, Wardha (Formerly JBGVS)**



Shri. Sanjay Bhargava
Chairman & Trustee
Shiksha Mandal, Wardha

It gives me pleasure to address you through the prospectus. I thank you for choosing our college. Shiksha Mandal has always stayed true to its mission to build the nation through developing its students. But in recent times education faces multiple challenges due to the disconnect between education and employment.

We are acutely conscious of the need for education to lead to employment and working towards it. Since Science is the basis of technology and technology is the basis of competitiveness in the market place, Science should flourish. But, for a number of reasons Indian companies are still essentially importing technology and hence the coherent link between market, science and technology barely exists. This has led to decline in the student interest in a career in science. They prefer technology or Medicine. Or, in the proliferating skills based courses. All of which are increasingly expensive and their outcomes in terms of employment uncertain.

In today's world, change can render narrow skills obsolete very quickly. Broad based understanding and the ability to think for oneself stand the student in good stead. Employers now place as much emphasis on communication ability, sobriety, work ethic, emotional IQ; as on domain knowledge. We believe our college is good at building these attributes well. From a small beginning we have had some success in getting employment for our students last year. We continue to help our students succeed through entrance exams to good national institutions like IITs and IISERs.

For the last 3 years our teachers, along with teachers from other Shiksha Mandal colleges, have been helping Zilla Parishad and aided village schools improve their teaching and learning of science. This helps those students and the quality of our intake. We will continually try and improve the future of our students. In this we seek your understanding and support.

ABOUT US: BAJAJ COLLEGE OF SCIENCE

Bajaj College of Science, established in 1962 in Wardha, Maharashtra, is a renowned autonomous institution in Vidarbha. Accredited with a B++ grade by NAAC, we offer diverse academic programs to over 2000 students. Aligned with the National Education Policy, our college focuses on holistic education and innovation. Offering various undergraduate and postgraduate programs, Ph.D. courses, and certificate courses, we emphasize quality education and skill development. Since having academic autonomy in 2017, our college has established its own exam department, ensuring timely declaration of results and award of degrees through our own convocation. This allows students ample time for internships and other activities, enhancing their overall learning experience. Our well-equipped facilities include spacious laboratories, sophisticated analytical instrumentation facility, research centers, and a vast library. We organize seminars, competitive exam preparation classes, and webinars to enhance learning experiences. Recognized for our academic excellence, we have received grants for infrastructure development and research projects from various national bodies UGC, RUSA, DST. Our faculty members are experienced, meeting high standards of teaching and research. Ranked among the top 100 science colleges in India, we are dedicated to providing exceptional education and promoting innovation through science education.

Key Attributes:

- Academic Excellence
- Vibrant Campus Life
- Supportive Community
- Emphasis on Well-being
- Community Engagement
- State-of-the-Art Laboratories
- Career Development Initiatives
- Innovation and Research
- Registered Alumni Association
- Commitment to Excellence

Infrastructure and Facilities



Dear Esteemed Stakeholders,

As the Principal of Bajaj College of Science (BCS), under the aegis of Shiksha Mandal, Wardha, it is my privilege to welcome you to an institution dedicated to providing value-based quality education. Our unwavering commitment lies in fostering the holistic development of our students through student-centric teaching-learning practices.

In alignment with the transformative vision of the National Education Policy (NEP) 2020, BCS embraces innovative practices and opportunities to enhance the educational experience. We firmly believe that science education serves the noble purpose of addressing societal challenges and creating a harmonious world for all. At BCS, we place significant emphasis on co-curricular, extracurricular, and sports activities to ensure the comprehensive growth of our students. This focus has led our students to achieve numerous accolades at university, junior college, state, and national levels. The efforts of visionary management are evident in the facilities provided for student-centric activities. Recognizing the pivotal role of alumni in shaping the institution and its foundation, we prioritize fostering strong parent-teacher-alumni relationships for the academic success of our students. Through various programs, webinars, and lectures on diverse subjects such as Life Sciences, Mathematical Sciences, Start-up initiatives, Entrepreneurship, and Intellectual Property Rights (IPR), we aim to enrich the learning experience of both students and faculty members. Our Competitive Examination Cell diligently supports students in preparing for competitive exams like NEET, JEE, MHT-CET, NET, SET, GATE, IIT JAM, among others, resulting in a commendable success rate. The dedication of our faculty members is exemplary, as they play an important role in shaping students & lives and contributing significantly to the institution and its progress. Their collaborative efforts with the supporting staff have propelled our institution towards remarkable growth. As an autonomous institution, our curriculum aligns closely with the principles of NEP 2020, focusing on creating opportunity-centric syllabi tailored to meet the demands of the contemporary era. Our practical-based approach, coupled with hands-on modules, ensures that students are well-equipped for future job opportunities and overall knowledge enhancement. We are deeply committed to serving society with enthusiasm and dedication, striving to achieve our collective objectives. Let us join hands and work together to further elevate Bajaj College of Science as an inspiration of excellence.

Wishing you all a fulfilling journey of learning and growth!



Prof. Pradip Tekade
M.Sc., PhD, NET, SET, GATE

GOVERNING BODY

Shri. Shekhar Bajaj , President, Shiksha Mandal, Wardha.
Shri. Sanjay Bhargava , Chairman, Shiksha Mandal, Wardha.
Shri. Ambikaprasad Tiwari , Joint Secretary, Shiksha Mandal, Wardha.
Shri. Anurag Bajaj , Member, Shiksha Mandal, Wardha.
Dr. Arvind Sahu , Executive Director, Regional Center for Biotechnology, Faridabad.
Prof. Dr. W.N. Gade , Ex. Vice Chancellor, Savitribai Phule Pune University, Pune.
Dr. Mahendra Dhore , University Nominee, Principal, Shivaji Science College, Nagpur.
Dr. S.H. Bagade , Head, Department of Physics, Bajaj College of Science, Wardha.
Dr. P.F. Dhabarde , Head, Department of Botany, Bajaj College of Science, Wardha.
Shri. Bhupendra Lohiya , Admin Officer, Shiksha Mandal, Wardha.
Prof. M.R. Chandrakar , Head, Department of Zoology, Bajaj College of Science, Wardha.
Dr. P.A. Saudagar , IQAC Coordinator, Bajaj College of Science, Wardha.
Prof. P.V. Tekade , Principal, Bajaj College of Science, Wardha.
Smt. S.A. Dhore , Head Clerk, Bajaj College of Science, Wardha.

ACADEMIC COUNCIL

Prof. P.V. Tekade , Principal, Bajaj College of Science, Wardha.
Dr. Jairam M. Khobragade , Director, Institute of Science, Nagpur.
Dr. Rajesh Khaparde , Homi Bhabha Center for Science Education, TIFR, Mumbai.
Dr. S.P. Kalantri , Professor, MGIMS, Sevagram.
Dr. Ashutosh Murkute , Director, MGIRI, Wardha.
Dr. Yogesh Bhute , DRB Sindhu Mahavidyalaya, Nagpur.
Dr. Suresh Masram , Zoology Dept., RTM Nagpur University, Nagpur.
Dr. P.S. Jhaki , Govt. Institute of Science College, Nagpur.
Dr. V.M. Ghodki , Head, Department of Electronics, Bajaj College of Science, Wardha.
Shri. R.T. Katre , Head, Department of Mathematics, Bajaj College of Science, Wardha.
Dr. Mrs. U.A. Malode , Coordinator, Department of Biotechnology, Bajaj College of Science, Wardha.
Dr. S.H. Bagade , Head, Department of Physics, Bajaj College of Science, Wardha.
Dr. M.R. Chandrakar , Head, Department of Zoology, Bajaj College of Science, Wardha.
Dr. P.F. Dhabarde , Head, Department of Botany, Bajaj College of Science, Wardha.
Dr. N.P. Mohabansi , Head, Department of Chemistry, Bajaj College of Science, Wardha.
Shri. R.K. Thombare , Head, Department of Languages, Bajaj College of Science, Wardha.
Dr. A.D. Theng , Asso. Prof., Dept. of Zoology, Bajaj College of Science, Wardha.
Dr. D.D. Naik , Asst. Prof., Dept. of Botany, Bajaj College of Science, Wardha.
Dr. B.V. Mohite , Asst. Prof. Dept. of Microbiology, Bajaj College of Science, Wardha.
Shri. N.A. Barwat , Asst. Prof., Dept. of Chemistry, Bajaj College of Science, Wardha.
Dr. P.A. Saudagar , Asst. Prof., Dept. of Electronics, Bajaj College of Science, Wardha. (Member Secretary)

We are proud to inform you that being an autonomous college, we are the first in this district to implement NEP 2020 from the academic session 2023-24, aligning our educational practices with the vision of transforming the learning landscape in the country. We offer a progressive and multi disciplinary approach to education, focusing on experiential learning, skill development, and academic rigor. Through the integration of technology, autonomy for institutions and faculty members, and a culture of research and innovation, we strive to provide our students with a dynamic and enriching educational experience. With a diverse range of credit courses, including core courses, elective courses, interdisciplinary minor courses, vocational and skill enhancement courses, and open elective/generic courses, we ensure that our students receive a comprehensive education that prepares them for success in their future endeavors.

Multiple Exit Points

Under NEP, students will have the option to exit their degree programs at multiple points with a certificate, diploma, or degree depending on the number of years of study completed. This is known as the multiple exit points system. For example, a student enrolled in a four-year undergraduate program can choose to exit after one year with a certificate, two years with a diploma, after three years with a bachelor's degree, or after four years with an honors degree. This system allows students to have more flexibility in their education and to receive recognition for the work they have completed even if they do not complete the full program. It also allows for better integration of vocational education and training into higher education, as students can exit with a diploma or certificate that certifies specific skills or competencies.

Types of Credit Courses:

Some of the types of credit courses that will be available in UG/PG programmes under the NEP include:

- **Core courses:** These are the mandatory courses that all students must take as part of their degree programme. Core courses are designed to provide a foundational understanding of a particular subject or discipline.
- **Elective courses:** These are the courses that students can choose based on their interests or career goals. Elective courses may be related to the student's major or minor subjects or they may be from a completely different discipline.
- **Interdisciplinary minor courses:** These are the courses that combine elements from two or more disciplines. Interdisciplinary courses can help students develop a broader perspective and gain a deeper understanding of complex issues.
- **Vocational and Skill enhancement courses:** These are the courses that focus on developing specific skills that are relevant to the student's future career. Skill-based courses may include practical training, internships, or other forms of experiential learning.
- **Open Elective/Generic:** Open Electives are designed to provide students with the opportunity to explore a subject or discipline that is outside of their main area of study. This can help students develop a broader perspective, and gain new skills and knowledge that can be applied in their future careers.
- **On-the-job training (OJT):** NEP 2020 emphasizes the significance of OJT as a pivotal component of the educational experience. Through OJT, students have the opportunity to apply theoretical knowledge in real-world settings, gaining practical skills and industry-specific insights. This also adds to the credit course of the students at postgraduate level.

ACADEMIC PROGRAMMES AND COURSES

Sr.No.	Programmes	Aided/ Self-financed	Credits	Duration	Intake
UG Programmes					
1	B.Sc. Botany (Honours/Research)	Aided	176	4 Years	63 - Major 63 - Minor
2	B.Sc. Chemistry (Honours/Research)	Aided	176	4 Years	105 - Major 105 - Minor
3	B.Sc. Electronics (Honours)	Aided	176	4 Years	21 - Major 26 - Minor
4	B.Sc. Mathematics (Honours)	Aided	176	4 Years	42 - Major 48 - Minor
5	B.Sc. Microbiology (Honours/Research)	Aided	176	4 Years	42 - Major 42 - Minor
6	B.Sc. Physics (Honours)	Aided	176	4 Years	42 - Major 47 - Minor
7	B.Sc. Zoology (Honours/Research)	Aided	176	4 Years	63 - Major 63 - Minor
8	B.Sc. Computer Science (Honours)	Self-financed	176	4 Years	37 - Major 21 - Minor
9	B.Sc. Biotechnology (Honours)	Self-financed	176	4 Years	21 - Major 21 - Minor
PG Programmes					
1	M.Sc. Botany	Self-financed	88	2 years	22
2	M.Sc. Chemistry	Self-financed	88	2 years	22
3	M.Sc. Microbiology	Self-financed	88	2 years	22
4	M.Sc. Zoology	Self-financed	88	2 years	22
5	M.Sc. Mathematics	Self-financed	88	2 years	22
6	M.Sc. Physics*	Self-financed	88	2 years	22
Research Programmes					
1	Ph.D. in Botany	Self-financed	---	----	----
2	Ph.D. in Chemistry	Self-financed	----	----	----
3	Ph.D. in Zoology	Self-financed	----	----	----
4	Ph.D. in Microbiology	Self-financed	----	----	----

* Awaiting approval from RTM Nagpur University

ACADEMIC PROGRAMMES AND COURSES

Sr. No.	Programmes	Aided/ Self-financed	Credits	Duration	Intake
Diploma Programme					
1	Post Graduate Diploma in Clinical Research	Self-financed	3	9 months	25
Certificate Courses					
1	Herbs and Herbal Products	Self-financed	2	30 hours	30
2	Clinical Laboratory Technology	Self-financed	2	30 hours	25
3	Statistical Analysis using R	Self-financed	2	30 hours	40
4	Industrial Waste Water Management	Self-financed	2	45 hours	50
5	Nanoscience and Nanotechnology	Self-financed	2	45 hours	15
6	Vermicompost Technology	Self-financed	2	45 hours	20
7	Banking, Finance and Insurance (CPBFI)	Self-financed	2	30 hours	56
8	Software based "Spoken tutorial program" which is being promoted by IIT, Mumbai	Self-financed	2	30 hours	--
9	Introduction to Pharma and Biotech industry, CGMP, Quality control and Research in Industry	Self-financed	2	30 hours	40
10	Biofertilizer Production	Self-financed	2	45 hours	50
11	Astronomy and Indian Space Science	Self-financed	2	30 hours	25
12	Innovation, Start-up and Entrepreneurship	Self-financed	2	30 hours	50
13	Green Career	Self-financed	2	30 hours	30
14	Computer Awareness	Self-financed	2	45 hours	40
15	Data Science using R	Self-financed	2	45 hours	30
16	Sericulture	Self-financed	2	45 hours	20
17	Fresh Water Fish Culture	Self-financed	2	45 hours	20
18	Library Resources and Library Services	Self-financed	2	30 hours	50
19	Circuit Maker Simulation Software (Online)	Self-financed	2	30 hours	30
20	Arduino and sensor integration.	Self-financed	2	60 hours	20
21	Soaps, Detergents and Disinfectants	Self-financed	2	60 hours	100
22	Foundations for IIT-JAM Success: Comprehensive Certificate Course	Self-financed	2	60 hours	100
23	Python for Data Analysis	Self-financed	2	45 hours	20
24	Mushroom Cultivation	Self-financed	2	30 hours	30
25	Green synthesis of nanoparticles	Self-financed	2	30 hours	20

CREDIT STRUCTURE

B.Sc. PROGRAMME										
Level	SEM	Major		Minor RM	GE/ OE	VSEC (VSC, SEC)	AEC, VEC, IKS	OJT/FP/ CEP/CC/ RP	Cumulative Credit	Cumulative Credit/Year
		Core	Electives							
4.5	I	6	---	6	2	2 (VSC)	2 (AEC) 2 (VEC) 2 (IKS)	---	22	UG Certificate 44
	II	6	---	6	2	2 (SEC)	2 (AEC) 2 (VEC)	2 (CC)	22	
	Cumulative Credit	12	---	12	4	2+2	4+4+2	2	44	
Exit Option: Award of UG Certificate in Major and Minor with 44 credits and an additional 4 credits core bridge course corresponding to skill-based and vocational courses and internship OR continue with Major										
5.0	III	6	---	6	2+2	2 (VSC) 2 (SEC)	2 (AEC)	---	22	UG Certificate 88
	IV	6	---	6	2	2 (SEC)	2 (AEC)	2 (FP/CEP) 2 (CC)	22	
	Cumulative Credit	24	---	24	10	4+6	8+4+2	2+4	88	
Exit Option: Award of UG Diploma in Major and Minor with 88 credits and an additional 4 credits core NSQF course and internship OR continue with Major										
5.5	V	6+6	4	---	---	2 (VSC)	---	---	22	UG Degree 132
	VI	6+6	4	---	---	2 (VSC)	---	4 (OJT)	22	
	Cumulative Credit	48	8	24	10	8+6	8+4+2	2+4+4	132	
Exit Option: Award of UG Degree in Major and Minor with 132 credits OR continue with Major										

CREDIT STRUCTURE

6.0	VII	4+4 3+3	4	4	---	---	---	---	22	UG Honours Degree
	VIII	4+4 3+3	4	(RM)	---	---	---	4 (OJT/FP)	22	
	Cumulative Credit	76	16	24+4	10	8+6	8+4 +2	2+4+8	176	
Award of Four Year UG Honours Degree in Major and Minor with 176 credits										
6.0	VII	6+4	4	4 (RM)	---	---	---	4 (RP)	22	UG Honours with Research Degree 176
	VIII	6	4	---	---	---	---	4(OJT/FP) 8 (RP)	22	
	Cumulative Credit	64	16	24+4	10	8+6	8+4 +2	2+4+8 +12	176	
Award of Four Year UG Honours with Research Degree in Major and Minor with 176 credits										

M.Sc. PROGRAMME							
Level	SEM	Major		RM	OJT/FP/CS	Cumulative Credit	Cumulative Credit/Year
		Mandatory/ Core	Electives				
6.0	I	4+4+3+3	4	4 (RM)	---	22	PG Diploma with 44 Credits
	II	4+4+3+3	4	---	4 (OJT/FP/CS)	22	
	Cumulative Credit	28	8	4	4	44	
Award of One-Year PG Diploma in Major with 44 credits							
6.5	III	4+4+2+2	4	---	4 (RP)	22	PG Degree with 88 Credits
	II	4+4+3+3	2	---	6 (RP)	22	
	Cumulative Credit	56	14	4	4+4+6	88	
Award of Two-Year PG Degree in Major with 88 credits							

Abbreviations:

OE: Generic/ Open Electives **VSEC:** Vocational Skill and Skill Enhancement Courses **VSC:** Vocational Skill Courses **SEC:** Skill Enhancement Courses **AEC:** Ability Enhancement Courses **IKS:** Indian Knowledge System **VEC:** Value Education Courses; **FP:** Field projects; **CC:** Co-curricular Courses; **RM:** Research Methodology; **RP:** Research Project **CEP:** Community Engagement And Service **OJT:** On Job Training: Internship/Apprenticeship, **VSC-** Opted by same discipline students thus skills related to major can be incorporated, **SEC-** Opted by other discipline students thus fundamental skills of discipline could be incorporated

One credit is equivalent to one hour of teaching per week for theory classes and two hours of teaching for laboratories/practicals.

UNDERGRADUATE PROGRAMME

Eligibility for Admission to B.Sc. (Honors) Semester I		
Sr. No.	Group of subjects of 12th Standard students	Corresponding Next Higher Examination Major Science Subjects at B. Sc. First Semester along with Compulsory Verticals
1.	1. English or Any Modern Language 2. Physics, Chemistry, Mathematics, Biology	Any one science subjects as Major from Botany, Chemistry, Electronics, Mathematics, Microbiology Physics, Zoology, Com. Science, Biotechnology
2.	1. English or Any Modern Language 2. Vocational Course of 200 Marks 3. Physics, Chemistry, Mathematics	Any one science subjects as Major from Chemistry, Electronics, Mathematics, Physics, Computer Science
3.	1. English or Any Modern Language 2. Vocational Course of 200 Marks 3. Physics, Chemistry, Biology	Any one science subjects as Major from Botany, Chemistry, Microbiology, Zoology Biotechnology
4.	MCVC Group	
	a) Agriculture Group or Fisheries Group with Chemistry as one of the subjects	Any one science subjects as Major from Botany, Chemistry, Microbiology, Zoology, Biotechnology
	b) Para-medical group with Chemistry as one of the subjects	Any one science subjects as Major from Botany, Chemistry, Microbiology, Zoology, Biotechnology
	c) Engineering and Technology or Engineering & Technology repairs & maintenance group with Mathematics as one of the subjects	Any one science subjects as Major from Chemistry, Electronics, Mathematics, Physics Computer Science
	d) Engineering and Technology Group with Mathematics as one of the subjects	Any one science subjects as Major from Chemistry, Electronics, Mathematics, Physics, Com. Science

POSTGRADUATE PROGRAMME

Eligibility for Admission to M.Sc. Semester I		
1.	M.Sc. (Botany)	Botany as one of the subjects / Botany as either Major or Minor at the qualifying Three-Year B.Sc. or B.Sc. (Agriculture) Examination
2.	M.Sc. (Chemistry)	Chemistry or Industrial Chemistry or as one of the subjects / as either Major or Minor at the qualifying Three-Year B.Sc. Examination
3.	M.Sc. (Mathematics)	Mathematics as one of the subjects / as either Major or Minor at the qualifying Three-Year B.Sc. Examination.
4.	M.Sc. (Microbiology)	Microbiology / Biotechnology as one of the subjects / as either Major or Minor at the qualifying Three-Year B.Sc. Examination.
5.	M.Sc. (Zoology)	Zoology as one of the subjects / as either Major or Minor at the qualifying Three-Year B.Sc. Examination.
6.	M.Sc. (Physics)*	Physics as one of the subjects / as either Major or Minor at the qualifying Three-Year B.Sc. Examination.

Admissions for Ph.D. PROGRAMME is as per the norms of RTM Nagpur University for which notification is published from time to time on our website.

ADMISSION PROCESS FOR B.Sc. and M.Sc.

STEPS

- 1 Visit Bajaj College of Science, Wardha and collect the prospectus from Dr. Damle Library, keeping the receipt safe.
- 2 Head to the ICT center of the college with digital copies of your mark sheet, leaving certificate, and Aadhaar Card to complete the online application.
- 3 Upload the required documents and pay the registration fee online before the deadline.
- 4 The merit list will be posted on both the college notice board and the website.
- 5 If your name is on the provisional or merit list, meet with the admission committee as per the schedule. Bring all original documents along with two sets of photocopies and two recent passport-sized color photographs.
- 6 Submit the original documents for verification and complete the admission process.
- 7 Once the original documents are verified successfully, finalize your admission by paying the necessary fee online on the website www.feepayr.com. Payment can be made using a debit card, UPI app (Google Pay, PhonePe etc.), or internet banking.
- 8 Obtain the admission receipt and revisit the admission committee for confirmation.
- 9 Upon completion of all steps, receive your college roll number and section allocation from the admission committee.

FEE REFUND POLICY

The fee refund policy will be as per UGC Notification of October 2018.

Time of Cancellation of Admission	Percentage of Refund of fees
15 days or more before the formally notified last date of admission	100%
Less than 15 days before the formally notified last date of admission	90%
15 days or less after the formally notified last date of admission	80%
30 days or less, but more than 15 days after the formally notified last date of admission	50%
More than 30 days after the formally notified last date of admission	0%

RESERVATION POLICY

- Being a Hindi Linguistic Minority College, 50% seats are reserved for Hindi speaking students domiciled in Maharashtra.
- Remaining 50% seats and Vacancies left in Hindi Linguistic Minority quota will be available for Non-Hindi speaking students and will be filled according to Maharashtra Government Rules and Regulations.

Scheduled Caste (S. C.)	13 %
Scheduled Tribes (S. T.)	7 %
Nomadic Tribes (N.T.) - (A)	3 &
Nomadic Tribes (N.T.) - (B)	2.5 %
Nomadic Tribes (N.T.) - (C)	3.5%
Nomadic Tribes (N.T.) - (D)	2 %
Other Backward Class	19 %
Special Backward Class	2 %
Physically Handicapped	3 %
For various categories together i) Transferred Central/State Officer's Ward ii) Ex-serviceman/Defence Ministry iii) National level merit holders in the field of Sports and Cultural Programme iv) Widow v) Freedom Fighter's son/ grand-son/daughter	3 %

Change in the reservation criteria, if any, will be as per the government resolution.

List of Languages Grouped under Hindi

As per the Eighth Schedule to the Constitution of India, following languages are grouped under '**Hindi**' language

1) Awadhi	13) Garhwali	25) Lamani/Lambadi	37) Pahari
2) Bagheli/ Baghel/ khandi	14) Harauti	26) Laria	38) Pachpargania
3) Bagri Rajasthani	15) Haryanvi	27) Lodhi	39) Pangwali
4) Banjari	16) Hindi	28) Magadhi/ Magahi	40) Pawari/ Powari
5) Bharmauri/ Gaddi	17) Jaunsari	29) Maithili	41) Rajasthani
6) Bhojpuri	18) Kangri	30) Malvi	42) Sadan/ Sadri
7) Braj Bhasa	19) Khairari	31) Mandeali	43) Sanori
8) Bundeli/ Bundel/ Khandi	20) Kortha/ Khotta	32) Marwari	44) Sirmauri
9) Chambeali	21) Kulvi	33) Mewari	45) Sondwari
10) Chattisgarhi	22) Kumauni	34) Mewati	46) Sugali
11) Churahi	23) Kurmal Thar	35) Nagpuria	47) Surgujia
12) Dhundhari	24) Labani	36) Nimadi	48) Sujapuri

Proforma of Affidavit to be submitted by Linguistic Minority Students

Scan & Download



PROPOSED ACADEMIC CALENDAR FOR THE SESSION 2024-2025

	Month	Events / Activities
Academic Part	Odd Semester Session From June 2024 to October 2024	
	18th June 2024	<ul style="list-style-type: none"> • Commencement of Odd Semester of B.Sc. Sem III and Sem V and M.Sc. Sem III Classes
	July 2024	<ul style="list-style-type: none"> • Admission of Odd Semester B.Sc. I and M. Sc. I under NEP
		<ul style="list-style-type: none"> • Commencement of Odd Semester of B.Sc. Sem. I and M.Sc. Sem I Classes
Even Semester Session from December 2024 to April 2025		
	December 2024	<ul style="list-style-type: none"> • Commencement of Even Semester Classes - B.Sc. Sem IV, VI & M. Sc. Sem IV
Curricular / Cocurricular Extra-curricular Activities	June 2024	<ul style="list-style-type: none"> • International Yoga Day
	July 2024	<ul style="list-style-type: none"> • World Population Day • Induction programme for newly admitted UG/PG students
		<ul style="list-style-type: none"> • Forest Conservation Day
	August 2024	<ul style="list-style-type: none"> • Quit India Movement Celebration • Independence Day Celebration • Internal Class Examination (ICE-I)
		<ul style="list-style-type: none"> • Library Day • World Sports Day
		<ul style="list-style-type: none"> • Teachers Day Celebration • Hindi Diwas • Internal Class Examination (ICE-II)
	September 2024	<ul style="list-style-type: none"> • International Literacy Day • NSS Day
		<ul style="list-style-type: none"> • Wildlife Week • Wachan-Pathan Diwas • Internal Class Exam (ICE-III) / College Terminal Exam
	October 2024	<ul style="list-style-type: none"> • Mahatma Gandhi Jayanti • World Internet Day
	Nov. to Dec. 2024	<ul style="list-style-type: none"> • Graduation Ceremony
	December 2024	<ul style="list-style-type: none"> • NCC Day • Human Rights Day • National Maths Day
		<ul style="list-style-type: none"> • National Aids Day • Minority Rights Day • NSS Camp
	January 2025	<ul style="list-style-type: none"> • National Youth Day • Republic day celebration • National Cleanliness Day
<ul style="list-style-type: none"> • Army Day • Martyr's Day • Internal Class Exam (ICE-I) 		
February 2025	<ul style="list-style-type: none"> • Marathi Rajbhasha Din • National Science Day - Scintillation - 2025 • Internal Class Exam (ICE-II) 	
March 2025	<ul style="list-style-type: none"> • International Women's Day • Internal Class Exam (ICE-III) / College Terminal Exam 	
April 2025	<ul style="list-style-type: none"> • World Health Day • World Book Day 	
	<ul style="list-style-type: none"> • Dr. Babasaheb Ambedkar Jayanti 	
Examination Schedule	November / December 2024	<ul style="list-style-type: none"> • Odd Semester Theory Exam of B.Sc Sem I, III & V and M.Sc Sem I, III
		<ul style="list-style-type: none"> • Declaration of Result of Odd Semester
	Apri-May 2025	<ul style="list-style-type: none"> • Even Semester Theory Exam
		<ul style="list-style-type: none"> • Declaration of Result of Even Semester

In addition to the main academic calendar, there will be a separate event calendar specifically dedicated to the activities organized by the IIC, RICH Club, and other students' clubs and societies within the institute. This dynamic calendar will be regularly updated by these entities to provide students with the latest information on a wide range of events. From enriching workshops and exciting competitions to captivating cultural events and impactful community service initiatives, this calendar will serve as a vibrant showcase of the diverse and engaging environment that awaits students at our institute.

Diwali / Winter / Summer Vacation - As per RTM Nagpur University Academic Calender

1. A student admitted to Bajaj College of Science must maintain an ethos of commitment to the academic programme. She/he is expected to aim at the highest achievement in every sphere and to conduct himself/herself in a responsible and dignified manner wherever she/he may be.
2. College/office phone numbers are available during college office hours.
3. According to the University regulations, the students must attend 75% of all classes. Prior permission from the respective head of the department (HOD)/ faculty is necessary for taking leave from the college. In case of an emergency like serious illness, the guardians/parents should inform the college office immediately and when the student re-joins the college, she/he should submit to the head of the department relevant documents like prescription of the doctor, medical certificate, etc. Such documents submitted at the end of the semester/year will not be accepted.
4. Students are expected to be punctual at the lectures, tutorials and all the activities of the colleges. A student is allowed to enter the first lecture only once a month. If a student is late more than once a month, s/he can enter the class with the permission of the Professor.
5. It is not enough to be physically present in the class. Students must maintain discipline in the class. Any act of indiscipline may lead to disciplinary action.
6. A student must also attend all the functions and curricular, co-curricular and extracurricular activities of the college such as, cultural functions, seminars, symposia, debates, quizzes, essay competitions, sports, community services (NSS, CWSS, and PEC), exposure programme, retreat, etc.
7. A prior permission is required from the HODs/teacher for any absence either from classes, all the functions and curricular, co-curricular and extra-curricular activities (NSS, CWSS, and PEC), or any other college activity.
8. The student's name is liable to be dropped from the rolls, if she/he is absent continuously for more than 10 days without prior intimation. A re-admission fee will be charged, if re-admission is granted at all.

- 9.** Use of mobile phones during the class hours is strictly prohibited and is punishable. In case of violation of this code, the mobile phones may be confiscated or fine imposed or both.
- 10.** Students should come to the college in college uniform/simple and modest dress, befitting an institution of higher learning.
- 11.** There are several books in the library. Every student is expected to make the best use of it. Making sure, however, to observe the library rules thoroughly.
- 12.** Once the teaching days are over, the students will be allowed to check out books in the library as per library rules.
- 13.** Students should always put on their ID cards in the college premises. It must be given to any authority of the college for inspection on demand.
- 14.** If an ID is lost for the first time, students will have to pay the cost of that ID and if they lose it for a second time, they will have to pay the cost of a new one.
- 15.** No visitors for students are allowed during lecture hours.
- 16.** No meetings should be held in the college, nor any new activity be taken up without the consent of the Principal/ HOD/Teacher.
- 17.** No student will leave the college premises without the Principal's/ HOD's/Teacher's permission, except to go home after the lectures are over.
- 18.** Ragging is a criminal offence and those found indulging in, will have to face immediate expulsion and legal action. Any offence regarding gender discrimination, eve-teasing, disrespectful acts, or words will be dealt with severely and may lead to dismissal from the college.
- 19.** No student shall come to the college under the influence of any intoxicant and if found, serious disciplinary action will be taken. No student shall be found chewing tobacco products or any such things in the college building.
- 20.** We expect all students to uphold the values and standards of the college by conducting themselves in a manner befitting a place of higher learning. By doing so, we can ensure that our campus remains a respectful and enriching environment for everyone.

ABOUT THE DEPARTMENT

The Department of Botany was established in 1962. Dr. V. P. Damle was the founder Principal and Mrs. K. V. Damle, the founder Head of the Botany Department. Since its inception, the Department is recognized for teaching and research in the various areas of Botany. M.Sc. programme was initiated in 2003-04. Department has undertaken research projects financed by UGC, DBT, DST and other agencies. Faculty members have active collaborations with other departments, research institutes to address interdisciplinary challenges in agriculture and environmental conservation. Department has facilities of botanical garden, museum, herbaria and field stations for hands-on learning and experimentation. Department provides a platform and opportunities for students to participate in research projects, internships, conferences and field work to gain practical experience and skills in plant sciences. Department has received a status of recognized research center by RTM Nagpur University, Nagpur in 2012. Department imparts quality education at B.Sc., M.Sc. and Ph.D. level.

HIGHLIGHTS OF THE DEPARTMENT

- Comprehensive and up-to-date curriculum that covers various aspects of Plant Biology and Botany.
- Equipped with modern laboratories, Botanical Gardens, and research facilities to support practical learning and experimentation in Botany.
- Access to research opportunities in areas such as plant ecology, conservation Biology, and plant genetics, allowing hands-on experience and contributions to botanical knowledge.
- Opportunity to engage with industry partners through internships, projects, and guest lectures, fostering valuable connections and real-world experience in the field of Botany.
- Offers career guidance and support, assisting students in exploring various career paths in botany and related fields, and preparing them for their professional endeavors.
- Recognised faculties as Ph.D. supervisors.
- Provision of Consultancy services provided for Identification and Authentication of Plants.

ACADEMIC PROGRAMMES OFFERED

- **B.Sc. in Botany**
- **M.Sc. in Botany**
- **Ph.D.**
- **Certificate Courses***
 - Herbs and Herbal Products
 - Statistical Analysis using R
 - Mushroom Cultivation

* Students can enroll and complete certificate courses during their B.Sc./M.Sc. in respective subjects.



HIGHLIGHTS OF THE SYLLABUS UNDER NEP 2020

The curriculum has been revised and constructed in accordance with the stipulations outlined in the National Educational Policy (NEP 2020). The curriculum of the Bachelor of Science in Botany program covers fundamental areas of study within the field of plant science. These areas include plant diversity - I and II, plant systematics, cell biology and biostatistics, plant anatomy and embryology, plant physiology, and plant biotechnology. In addition to fundamental core subject knowledge, the curriculum incorporates vocational skill courses (VSC) and skill enhancement courses (SEC) such as mushroom cultivation, horticulture, hydroponics, and medicinal plant cultivation. These courses aim to facilitate experiential learning, foster the development of logical, creative, and innovative skills among students, and equip them with the necessary tools to bridge the divide between science, technology, and industries.

The M.Sc. Botany syllabus has been meticulously developed in alignment with the National Education Policy (NEP) of 2020, emphasizing a comprehensive understanding of botany through specialized core subjects such as phycology, mycology, genetics, plant breeding, cell and molecular biology, as well as elective courses including tools and techniques, angiosperm taxonomy, and economic botany. Additionally, to promote a research-oriented environment, a dedicated research methodology course has been introduced to enhance students' comprehension of diverse research facets in the field of Botany.

RESEARCH AREAS

Plant Biotechnology, Plant Systematics, Plant Molecular Biology, Mycology, Plant Pathology, Phytochemistry, Plant Tissue Culture, Ethnobotany, Paleobotany, Plant Ecology.

BOARD OF STUDIES

Teaching Faculties

Dr. P. F. Dhabarde

M.Sc., Ph.D.
Head & Associate Professor
Date of Joining : 22.12.2004

Dr. D. D. Naik

M.Sc., Ph.D.
Assistant Professor
Date of Joining : 06.07.2015

Dr. A. A. Maheshwari

M.Sc., Ph.D., CSIR- NET, GATE
Assistant Professor
Date of Joining : 02.12.2019

Dr. Swati Kalode

M.Sc., M. Phil., B.Ed., Ph.D.
Assistant Professor (Contract)

Dr. Arati Ghuse

M.Sc., Ph.D.
Assistant Professor (Contract)

Dr. Satishkumar G. Maurya

M.Sc., GATE, Ph.D.
Assistant Professor (Contract)

External Members

- ◆ **Dr. Varsha Nathar**, Professor and Head, Department of Botany, SGB Amravati University, Amravati.
- ◆ **Dr. M. S. Phalak**, General Manager R & D, Ankur Seeds Pvt. Ltd., Nagpur.
- ◆ **Dr. Nitin Dongarwar**, Professor and Head, Department of Botany, RTM Nagpur University, Nagpur.
- ◆ **Dr. Nitin Labhane**, Professor and Dean, R & D, Department of Botany, Bhavan's College, Andheri-W, Mumbai.
- ◆ **Mrs. Trupti Dhakate**, Alumni Representative, Quality Mushroom Farms, Pune



ABOUT THE DEPARTMENT

Chemistry is the central science and its applications encompass all the aspects of human civilization. Over the centuries the subject has offered wide scale career opportunities to young and innovative minds. Since its establishment the department has made enormous progress in academics and research. The department provides quality education in the subject with sufficient flexibility to enable students to specialize in the areas of interest to them. Along with UG and PG, the department has recognition of laboratories as a place for Higher Learning and Research (Doctoral Programme - Ph.D.) by RTM Nagpur University, Nagpur. Department has a dedicated team of faculty members trained at renowned institutes in India and abroad, for research supervision. The faculty members have financial support for their research activities from government, private agencies as well as parent institute (seed money). They have successfully completed nine minor research projects funded by UGC/RGSTC; RTM Nagpur University, Nagpur/Parent institute. Faculty members have been awarded with Medals/Prizes for distinction in their areas of research. Department offers a vibrant atmosphere to students and faculties to nurture the spirit of research culture/environment.

HIGHLIGHTS OF THE DEPARTMENT

- Department organizes workshops on NET, SET, GATE, IIT-JAM and TIFR competitive exams for UG and PG students for the guidance regarding syllabus and strategies for preparation of these exams.
- Department undertakes various activities viz; Guest Lectures, Educational Tours, Student Seminars, Quiz, Poster Competition etc under the banner of Chemical Society.
- Department has implemented microscale level practicals at UG and PG level to certain extent which saves a lot of chemicals.
- Department has introduced “Blended mode of Teaching” using Moodle-Gnomio since 2017.
- Department organizes “Concept Test in Chemistry (CONTECH)” in association with Association of Chemistry Teacher (ACT) in correspondence with Homi Bhabha Centre for Science Education (HBCSE), TIFR Mumbai.
- Department organizes “CHEMIAD” examination in association with Savitribai Fule Pune University, Pune.
- Along with co-curricular, extra-curricular activities students are participating in Avishkar and Innovation Competitions.

ACADEMIC PROGRAMMES OFFERED

- **B.Sc. (Chemistry)**
- **M.Sc. (Chemistry)**
- **Ph.D.**
- **Certificate Courses***
 - Industrial Waste Water Management in collaboration with St. Xavier's College, Mumbai
 - Innovation, Start-up and Entrepreneurship
 - Foundation for IIT-JAM Success: Comprehensive Certificate Course
 - Soap, Detergents and Disinfectants

* Students can enroll and complete certificate courses during their B. Sc. in respective subjects



HIGHLIGHTS OF THE SYLLABUS UNDER NEP 2020

The syllabus has been modified and designed as per the requirement of National Education Policy (NEP-2020). Syllabus provides comprehensive knowledge of Chemistry (theory & practical) and will prepare students for entry into a wide variety of careers. It covers wide range of topics from Inorganic, Organic and Physical Chemistry as:

- Fundamentals of Core Chemistry
- Stereochemistry
- Heterocyclic Compounds
- Natural Products
- Thermodynamics
- Reaction Dynamics
- Electrochemistry
- Nuclear Chemistry
- Surface Chemistry
- Retrosynthesis
- Quantum Chemistry
- Spectroscopy
- Coordination Chemistry
- Biochemistry
- Analytical Chemistry
- Photochemistry/Pericyclics
- Environmental Chemistry
- Instrumental Analysis
- Green Chemistry
- Organometallics

Apart from basic subject learning, some Vocational Skill Courses (VSC), Skill Enhancement Courses (SEC) are taught and students also exposed to On Job Training (OJT) as a part of curriculum so as to provide experiential learning, develop the logic, creativity, innovative skill and exposure to work skill of industries to bridge the gap between science, technology and industries.

RESEARCH AREAS

Synthetic chemistry, Photocatalysis, organometallics, analytical chemistry, Pharmacology, stability of complexes, Medicinal chemistry, Bio-organic chemistry, Organophysical Chemistry, Insilico chemistry, Nanotechnology, Nanochemistry, Biopolymer, Adsorption, Physical Chemistry, Synthetic Organic Chemistry, Asymmetric Synthesis, Organocatalysis, Heterocyclic Chemistry, Advanced Nanomaterials: Synthesis and Applications in Catalysis, Organic Transformations, Inorganic Chemistry, Coordination Chemistry, Environmental Chemistry.

BOARD OF STUDIES**Teaching Faculties****Prof. P. V. Tekade**

M.Sc., B.Ed., SET, NET, GATE, Ph.D.
Principal
Date of Joining: 01.12.2004

Dr. Mrs. N. P. Mohabansi

M.Sc., B.Ed., SET, Ph.D.
Head & Associate Professor
Date of Joining: 04.01.2007

Dr. K.M. Dadure

M.Sc., B. Ed., M.Phil., Ph.D., F.I.C.S.
Assistant Professor
Date of Joining: 02.07.2007

Shri. M.D. Bansinge

M.Sc., NET
Assistant Professor
Date of Joining: 29.07.2013

Shri. N.A. Barwat

M.Sc., SET, NET
Assistant Professor
Date of Joining: 29.07.2013

Dr. P.G. Borkar

M.Sc., SET, NET, GATE, Ph.D., Post Doc.
Assistant Professor
Date of Joining: 07.02.2017

Dr. A.V. Nakhate

M.Sc., NET, GATE, Ph.D., Post Doc.
Assistant Professor
Date of Joining: 02.12.2019

Dr. Miss. Mahejabeen Haque

M.Sc., B.Ed., SET, Ph.D.
Assistant Professor
Date of Joining: 02.12.2019

Miss. Monali Awchat

M.Sc., SET, NET, GATE
Assistant Professor (Contract)

Miss. Vaishnavi Gidmare

M.Sc.
Assistant Professor (Contract)

External Members

- ◆ **Dr. S.D. Thakur**, Professor and Head, B.R.D. Arts, S.I.K. Commerce and N.K.D. Science College, Badnera, Amravati.
- ◆ **Mr. Marazban Kotwal**, Associate Professor and Head, St. Xavier's College, Mumbai (Autonomous).
- ◆ **Dr. N.N. Karade**, Professor and Head, Department of Chemistry, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.
- ◆ **Dr. Anil Gawade**, Director (R&D) Cleanchem Laboratories LLP, Mumbai

ABOUT THE DEPARTMENT

The Department of Electronics was established in 1985 with the vision to impart quality education for professional excellence and commitment for sustainable development. It offers B.Sc. course in Electronics. The department offers an excellent, diverse and inclusive learning environment to enable the students to meet the challenges of the future world and focuses on all round development of the students. This department has achieved remarkable success in the implementation of academic activities.

HIGHLIGHTS OF THE DEPARTMENT

- Well-equipped laboratories with state-of-the-art instruments for practical experimentation and hands-on learning in the field of electronics.
- Dedicated computer laboratory equipped for C Language programming and Simulation Software, along with ICT facilities to support comprehensive learning
- Implementation of a cutting-edge curriculum designed to cover the latest developments and advancements in the field of electronics, ensuring students are well-prepared for industry demands.
- Access to a departmental library for quick reference and research, providing students with resources for in-depth study and academic support.
- Encouragement and support for students' projects, fostering creativity, innovation, and practical application of theoretical knowledge in electronics.
- Design and fabrication of experimental kits within the department, providing students with hands-on experience in the development of electronic systems and devices.
- Mentor-mentee relationships to provide personalized guidance, support, and mentorship for students, fostering their academic and professional growth within the field of electronics.

ACADEMIC PROGRAMMES OFFERED

- **B.Sc. in Electronics**
- **Certificate Course in Circuit Maker (Online)**

* Students may enroll and complete certificate course during their B. Sc. in respective subjects.



HIGHLIGHTS OF THE SYLLABUS UNDER NEP 2020

The B. Sc. Electronics curriculum has been updated in line with the National Education Policy (NEP 2020) and adheres to the guidelines set forth by the Government of Maharashtra and RTM Nagpur University. It encompasses essential areas of electronics, including Analog and Digital Electronics, Operational Amplifiers, Semiconductors, Electronic Instrumentation, Microprocessors, Microcontrollers, Sensors, and high-level computer languages. Alongside these core subjects, students participate in vocational skill courses (VSC) and skill enhancement courses (SEC) integrated into the curriculum. These courses are designed to provide practical learning experiences, promote logical thinking, nurture creativity and innovation skills.

BOARD OF STUDIES

Teaching Faculties

Dr. V. M. Ghodki

M. Sc., PGDCS, Ph.D.
Head & Professor
Date of Joining : 13.08.1988

Dr. P. A. Saudagar

M.Sc., PGDCS, M.C.A., NET, Ph.D.
Assistant Professor
Date of Joining : 02.12.2013

External Members

- ◆ **Dr. P. B. Dahikar**, Principal, Shri. Santaji Arts and Science College, Palandur, Dist. Bhandara.
- ◆ **Dr. A. A. Yadav**, Associate Professor, Department of Physics, Electronics and Photonics, Rajshri Shahu Mahavidyalaya (Autonomous), Latur.
- ◆ **Mr Rajay Dahake**, "GARWA" Asha Residency, VIP Road, Wardha.
- ◆ **Dr. G. S. Nivekar**, Department of Electronics, Yashvantrao Chavan Institute of Science (Autonomous), Satara (M.S.)
- ◆ **Dr. Ashish A Nimbekar**, Associate Professor, Department of Physics, Fergusson College, Pune.
- ◆ **Dr. G. D. Zade**, Associate Professor, Department of Physics, Jawaharlal Nehru Arts, Commerce and Science College, Wadi, Nagpur.

Major Equipment

- **CRO (Oscilloscope)**
- **Frequency Counter**
- **Function Generator**
- **Microcontroller Kit**
- **Microprocessor Kit**
- **Magnetic Stirrer (Hot Plate)**
- **DSO**
- **Function Pulse Generator**
- **Hot Air Oven**
- **LCR Bridge Digital**
- **Microcontroller Dev. Board**
- **National Instrument's Elvis II**



ABOUT THE DEPARTMENT

The Department of Microbiology, established in 1980, has evolved into a recognized center of excellence in microbiology, excelling in both teaching and learning. At the undergraduate level, the department offers a B.Sc. course with Microbiology as one of the subjects, and in 2006, an additional non-grant UG course was introduced, encompassing Biotechnology, Microbiology, and Chemistry. The M.Sc. Microbiology program, following the CBCS pattern, was initiated in 2007. In 2016, the department introduced the Career Oriented Programme in Clinical Laboratory Technology on a self-finance basis, with an intake capacity of 40 students. Furthermore, the Post Graduate Diploma in Clinical Research was launched in the academic year 2021-2022. The department's commitment to excellence was acknowledged when it received the Best Department award from the Microbiologist Society, India (MBSI)

HIGHLIGHTS OF THE DEPARTMENT

- Well-equipped laboratory with modern facilities for conducting a wide range of microbiological experiments and research.
- Qualified staff comprising experienced faculty members who are experts in various domains of microbiology.
- Self-sufficient departmental library housing a comprehensive collection of books
- Comprehensive collection of books and resources relevant to microbiology, supporting students' academic and research needs.
- Provision of consultancy services for microbial analysis of water, soil, and biofertilizers, offering practical application of microbiological knowledge and expertise.
- Notable alumni who have secured prominent positions at esteemed institutions such as NCCS, Pune, Institute of Microbial Technology, Chandigarh, NEERI, Institute of Clinical Research, Nagpur, and National Research Centre for Citrus, Nagpur, showcasing the department's contribution to the field of microbiology and its impact on the professional success of its graduates.

ACADEMIC PROGRAMMES OFFERED

- **B.Sc. in Microbiology**
- **M.Sc. in Microbiology**
- **Ph.D.**
- **Certificate Courses***
 - Clinical Laboratory Technology
 - Biofertilizer Production
 - Introduction to Pharma and Biotech industry, CGMP, Quality control and Research in Industry

* Students can enroll and complete certificate courses during their B. Sc./M.Sc. in respective subjects.



HIGHLIGHTS OF THE SYLLABUS UNDER NEP 2020

The Undergraduate syllabus of microbiology has been modified and designed as per the requirements of National Educational Policy (NEP 2020). Syllabus deals with core branches of Microbiology which includes microbial morphology, microbial techniques, industrial Microbiology, medical Microbiology, immunology. Apart from basic subject learning, some vocational skill courses (VSC) like Elementary microbiology, Biopreservation of perishable foods, Microbiology of wine making & General elective courses (GE) such as Food spoilage & safety, Basics of soil health etc. are taught as a part of curriculum. This will provide experiential learning and will develop the creativity & innovative skills among students to orient themselves to bridge the gap between Microbiology and industries.

The postgraduate syllabus encompasses core branches of Microbiology, including microbial metabolism, enzymology and techniques, medical microbiology and parasitology, immunology and immunodiagnosics, and microbial methods for environmental management. In addition to fundamental subject learning, the syllabus also incorporates a comprehensive study of research methodology. Furthermore, the syllabus offers students the opportunity to engage in apprenticeships, field projects, and case studies as part of the curriculum, facilitating experiential learning and nurturing creativity and innovative skills to prepare students to bridge the gap between Microbiology and industries.

RESEARCH AREAS

Applied Microbiology, Environmental Microbiology, Medical Microbiology, Agricultural Microbiology, Microbial Biotechnology

BOARD OF STUDIES**Teaching Faculties****Dr. Mrs. U.A. Malode**

M.Sc., Ph.D.
Head & Assistant Professor
Date of Joining: 15.06.2012

Dr. M.G. Ingale

M.Sc., Ph.D., NET
Assistant Professor
Date of Joining:: 02.12.2019

Dr. B.V. Mohite

M.Sc., M. Phil., Ph.D.
Assistant Professor
Date of Joining:: 13.12.2019

Ms. S.E. Banarase

M.Sc., NET, SET, ARS-NET, GATE
Assistant Professor (Contract)

Ms. K.N. Pimpalkar

M.Sc., B.Ed., DMLT, PET
Assistant Professor (Contract)

External Members

- ◆ **Dr. Shilpa Mujumdar**, Head, Department of Microbiology and Vice-Principal, Modern College of Arts, Science and Commerce, Pune.
- ◆ **Dr. Sanjiv Patankar**, Former. Principal, S. Jaiswal College, Arjunimorgaon.
- ◆ **Dr. Vijay Charde**, Ex. Professor and Head, Dept of Microbiology, Taywade College, Mahadula-Koradi, Dist. Nagpur.
- ◆ **Dr. Sarita Mohan Mowade**, Director, SS Technovision and Ecosolutions, MIDC, Hingna, Nagpur.



ABOUT THE DEPARTMENT

The Department of Physics was founded in 1962 under the leadership of Dr. D.S. Supe has since evolved into one of the best-equipped centers for undergraduate studies in this region. The department's primary objective is to foster a deep appreciation for the subject among students and ignite their curiosity regarding the social and economic impacts of Physics in society. It boasts three distinct laboratories, including a dark room equipped with over 100 experimental setups, providing students with ample opportunities for hands-on learning and research.

HIGHLIGHTS OF THE DEPARTMENT

- Well-equipped and spacious laboratories with over 100 experimental setups.
- Availability of computer and internet facilities for research and study purposes.
- Provision of a separate departmental library for academic resources.
- Providing exposures in organizing and participating state-level and national-level events.
- Implementation of online digital teaching methodologies, including online video classes, YouTube lectures by faculty members, e-contents, Google Classrooms, Moodle, etc.
- Recognition as a center for the National Graduate Physics Examination (NGPE) and host of National Photo Essay Competition in Physics (IAPT Activity).
- Guidance and support for students to actively participate in various intercollegiate competitions like quizzes, seminars, and more.
- Facilitation of student internship programs in nationally recognized institutes or departments
- Night sky watching activities through Astro Club.
- Hands-on training opportunities with advanced instruments like X-ray diffractometer (XRD), G.M. Counter, Digital Ultrasonic Pulse Echo Velocity Meter, Hall Effect Apparatus, Magnetic Susceptibility apparatus, Four probe Apparatus, Dielectric Constant and Curie Temperature apparatus, Dual Trace C.R.O, digital polarimeter, Fabry-Perot Interferometer, B-H loop tracer, LCR Meter, and many more.

ACADEMIC PROGRAMMES OFFERED

- **B.Sc. in Physics**
- **M.Sc. in Physics***
- **Certificate Courses**
 - Nanosense: Nanoscience and Nanotechnology
 - Astronomy and Indian Space Science
 - Arduino and Sensor Integration

Students can enroll and complete certificate courses during their B. Sc. in respective subjects.



HIGHLIGHTS OF THE SYLLABUS UNDER NEP 2020

The syllabus has been upgraded and aligned with the guidelines of the National Education Policy (NEP 2020). It covers fundamental areas of physics such as mechanics, electricity and magnetism, waves and optics, thermodynamics and statistical physics, quantum mechanics, relativity, nuclear physics, nanoscience, solid-state physics, and solid-state electronics. In addition to the core subjects, students also engage in vocational skill courses (VSC) and skill enhancement courses (SES) as part of the curriculum. These courses aim to facilitate hands-on learning experiences, foster logical thinking, nurture creativity and innovation skills among students, and prepare them to bridge the gap between science, technology, and industries.

RESEARCH AREAS

Theoretical and mathematical physics, physics education research (PER), Material Science and Characterization, Condensed Matter Physics, Optics and Photonics, Solid State Physics, Nanotechnology and Nanomaterials, Semiconductor Physics, Magnetic Materials, Glasses, Thin Films and Surface Science.

BOARD OF STUDIES

Teaching Faculties

Dr. S.H. Bagade

M.Sc.,PhD, SET
Head & Associate Professor
Date of Joining : 3.10.2003

Dr. G.V. Lakhotiya

M.Sc.,PhD, SET, GATE
Assistant Professor
Date of Joining : 14.8.2013

Dr. S.R. Tiple

M.Sc., PhD
Assistant Professor
Date of Joining :1.2.2017

Dr. M.M. Yerpude

M.Sc.,NET, PhD
Assistant Professor
Date of Joining :2.12.2019

External Members

- ◆ **Prof. Rupesh Gedam**, Professor, Department of Physics, VNIT, Nagpur.
- ◆ **Prof. Sandeep Waghuley**, Professor, Department of Physics, SGB Amravati University, Amravati.
- ◆ **Prof. Umesh Palikundwar**, Professor, Department of Physics, RTM Nagpur University, Nagpur.
- ◆ **Dr. U.D. Gulhane**, Professor and Head, Department of Mechanical Engineering, B.D. College of Engineering, Sewagram, Wardha.
- ◆ **Dr. Ashish A. Nimbekar**, Associate Professor, Department of Physics, Fergusson College, Pune.



ABOUT THE DEPARTMENT

Since the inception of the college, in 1962, the Department of Zoology has been established as a leading center for higher education in animal sciences. The department has a basic equipped instrument facility, which has been upgraded and a number of new modern Analytical instruments have been added. At present, the department is running UG (B.Sc.), PG (M.Sc.), certificate courses and is also a recognized research center for Ph.D. Laboratories have been upgraded with an audio-visual facility. Department has an up-to-date departmental library with the latest edition of books, internet facilities for students and a well established museum of local fauna having a unique collection.

HIGHLIGHTS OF THE DEPARTMENT

- Comprehensive and up-to-date curriculum that covers various aspects of animal biology, ecology, and Zoology.
- Equipped with modern laboratories, research facilities, and specialized resources to support practical learning and experimentation in Zoology.
- Access to research opportunities in multiple areas related to Zoology.
- Opportunity to engage with industry partners through internships, projects, and guest lectures, fostering valuable connections and real-world experience in the field of Zoology.
- Offers career guidance and support, assisting students in exploring various career paths in zoology and related fields, and preparing them for their professional endeavors.
- Recognized research guides for PhD enrolment.

ACADEMIC PROGRAMMES OFFERED

- **B.Sc. in Zoology**
- **M.Sc. in Zoology**
- **Ph.D.**
- **Certificate Courses***
 - Vermicompost Technology
 - Fundamentals of Sericulture
 - Fresh Water Fish Culture

* Students can enroll and complete certificate courses during their B. Sc. in respective subjects.



HIGHLIGHTS OF THE SYLLABUS UNDER NEP 2020

The syllabus has been modified and designed as per the necessities of national education policy (NEP-2020). At Undergraduate level the syllabus includes Theory and practicals related to Animal Diversity -Non chordates, chordates, cell biology, genetics, molecular biology, ethology, developmental biology, Ecology & Evolution; Mammalian Physiology; immunology, biochemistry, endocrinology parasitology, bioinformatics and biostatistics. The syllabus has been reframed considering students should be able to get through the competitive exams and should be able to opt for higher studies. Apart from basic subject learning, some vocational skill courses (VSC) and skill enhancement courses (SEC) regarding different laboratory techniques, fish keeping and silk worm rearing are taught as a part of curriculum, so as to provide specific skills to the students.

At postgraduate level the syllabus includes Theory and practicals related to Invertebrates, biochemistry, Cell Biology and Genetics; Vertebrates; Molecular Biology, Biotechnology, Parasitology and Immunology, Physiology, Bio-technique, Ethology, Toxicology and Bioinformatics i.e. from basics to advanced stream. The syllabus has been reframed considering students should be able to clear competitive exams and should be able to opt for research. Apart from this study, apprenticeship and research projects have also been introduced to inculcate research culture among students and for industrial exposure and experience. Apart from this for students of any stream (UG or PG) skill oriented certificate courses in vermicompost technology, fundamentals of sericulture and freshwater fish culture have also been introduced by the Zoology department which enables students to earn additional 2 credits and it also provides an opportunity to be an entrepreneur.

RESEARCH AREAS

Molecular Biology, Phylogenetics, Gerontology, Fisheries, Neuroendocrinology, and Nanoparticles.

BOARD OF STUDIES**Teaching Faculties****Dr. Miss. M.R. Chandrakar**

M.Sc., Ph.D., SET
Head & Associate Professor
Date of Joining : 05.09.2009

Dr. A.D. Theng

M.Sc., Ph.D., NET
Associate Professor
Date of Joining : 26.08.2010

Shri. V.P. Khandwekar

M.Sc., NET
Assistant Professor
Date of Joining: 02.09.2010

Dr. V.J. Sharma

Assistant Professor
M.Sc., Ph.D.
Date of Joining: 25.09.2012

Dr. S.P. Biswas

M.Sc., Ph.D., NET
Assistant Professor
Date of Joining: 06.12.2019

Mr. Praful Kalwade

M.Sc., NET
Assistant Professor
(Contract)

Ms. Sangita Yelane

M.Sc., B.Ed., NET-JRF, SET
Assistant Professor
(Contract)

External Members

- ◆ **Dr. Yogesh Bhute**, Professor, DRB Sindhu Mahavidyalaya, Nagpur.
- ◆ **Dr. S. O. Qureshi**, Science, Jairamdas Bhagchand Arts and Birla Commerce Mahavidyalaya, Dhamangaon Rly. Dist. Amravati.
- ◆ **Dr. H. P. Sapkal**, Professor, Shri. Shivaji College of Arts, Commerce and Science, Akola.
- ◆ **Mr. Vivek Khalokar**, Khalokar Beekeeping Enterprises, Narayan Peth, Pune.
- ◆ **Mr. Tejas Tajane**, Junior Research Fellow, Centre of genetics and Genomics, Department of Anatomy, MGIMS, Sewagram.

ABOUT THE DEPARTMENT

Established in 1962, the Mathematics department offers a wide range of academic programs in Mathematics at both the undergraduate and postgraduate levels. Students benefit from a rigorous mathematical education that is grounded in strong academic principles and values. The department prides itself on fostering an environment where all individuals actively contribute effectively, efficiently, and responsibly. Apart from academic excellence, the dedicated faculty members also prioritize the overall development of students through various co-curricular activities, internship opportunities, and career guidance initiatives. Additionally, the department encourages collaborative learning, critical thinking, and problem-solving skills to prepare students for success in their future endeavors.

HIGHLIGHTS OF THE DEPARTMENT

- Access to computer and internet facilities to support research and study endeavors
- Dedicated departmental library stocked with academic resources tailored to mathematics education
- Opportunities for organizing and participating in state-level and national-level mathematical events
- Implementation of innovative online teaching methods, including virtual classes, faculty-led YouTube lectures, e-content resources, Google Classrooms, and Moodle platforms
- Guidance and assistance for students to engage actively in intercollegiate competitions such as mathematical quizzes, seminars, and more
- Facilitation of student internship programs at renowned national institutes or departments
- Engaging activities like stargazing through an Astro Club to explore mathematical concepts in relativity and astronomy.

ACADEMIC PROGRAMMES OFFERED

- **B.Sc. in Mathematics**
- **M.Sc. in Mathematics**

HIGHLIGHTS OF THE SYLLABUS UNDER NEP 2020

The current syllabus has been meticulously designed in alignment with the mandates of the National Education Policy (NEP-2020). It encompasses both pure and applied mathematics tailored to meet the contemporary demands of the industry and enhance employability prospects.

Undergraduate (B.Sc.) mathematics syllabus covers a diverse range of topics including Algebra, Trigonometry, Calculus, Vector Analysis, Partial Differential Equations, Calculus of Variations, Mathematical Methods, Mechanics, Real and Complex Analysis, Linear Algebra, Numerical Methods, and Relativity. Additionally, Vocational Skill Enhancement Courses (VSEC) have been integrated into the curriculum to cultivate students' logical thinking, problem-solving abilities, and innovation skills, preparing them to excel in other subject areas.

For postgraduate (M.Sc.) mathematics students, the syllabus delves into advanced topics such as Algebra, Topology, Differential Equations, Integral Equations, Real Analysis, Differential Geometry, Classical Mechanics, Number Theory, Fluid Dynamics, Functional Analysis, Complex Analysis, Advanced Mathematical Methods, Partial Differential Equations, Advanced Numerical Methods, Operations Research, Cosmology, and Statistics with R-Programming. Furthermore, students engage in Research Methodology training, undertake On-Job Training (OJT) or Field Projects, and participate in Research Projects as part of the curriculum to foster experiential learning and develop their research and innovation skills.

BOARD OF STUDIES

Teaching Faculties

Shri R.T. Katre

M.Sc., SET, B.Ed.
Head & Assistant Professor
Date of Joining: 14.9.2009

Mr. R.S. Pradhan

M.Sc., SET
Assistant Professor
(Contract)

Ms. P.M. Belkhode

M.Sc.
Assistant Professor
(Contract)



External Members

- ◆ **Dr. Gaurav Varshney**, Associate Professor, Sri Dev Suman Uttarakhand University, Dehradun.
- ◆ **Dr. Vidya Sharma**, Professor and Head, Smt. Narsamma Arts, Commerce and Science College, Amravati.
- ◆ **Dr. R.K. Agrawal**, Professor & Head, Hislop College, Nagpur.
- ◆ **Dr. U.D. Gulhane**, Director, URVI Transformer MIDC, Wardha.
- ◆ **Mr. Ashwin Deotare**, Analyst, Teleperformance, Gurgaon.



ABOUT THE DEPARTMENT

The Department of Computer Science is one of the nine academic departments of the Bajaj College of Science, Wardha. The department came into existence in 1988. Global excellence, teaching, and technology development are the vision of the department. Since its establishment, it has been committed to the best IT education and has been continuously scaling new heights in the field of Information Technology.

HIGHLIGHTS OF THE DEPARTMENT

- Well-equipped UG laboratory featuring computers with the highest configuration, providing students with a conducive environment for practical learning and experimentation in computer science.
- Availability of a departmental library, providing students with access to a wide range of resources and materials to support their academic and research needs in computer science.
- Opportunities for students to engage in live projects and seminars
- High-speed Internet facility, enabling students to access online resources
- The department's inclusive nature, open to all students of the college, plays a pivotal role in shaping students' careers by providing them with essential computer skills and soft skills necessary for professional success

ACADEMIC PROGRAMMES OFFERED

- **B.Sc. in Computer Science**
- **Certificate Courses***
 - Computer Awareness
 - Python for Data Analysis
 - Introduction to Data Science using R

*Students may enroll and complete certificate courses during their B.Sc. in respective subjects.

HIGHLIGHTS OF THE SYLLABUS UNDER NEP 2020

- The curriculum has been designed and updated in accordance with the guidelines of the National Education Policy (NEP 2020). Upon completion of the course, students will:
- Possess a strong understanding of programming languages including C, C++, and Java, Visual Basic, SQL and PL/SQL along with exposure to the fundamentals of Information Technology, System Analysis Design and Development, Operating Systems, Database Management System and Compiler Construction.
- Subjects covered during graduation include: fundamentals of information technology programming in 'C', object oriented programming using 'C++', system analysis and design, data structures, operating systems, visual basic programming, database management system, compiler construction, sql and pl/sql
- In addition to the above subjects, students also participate in Vocational Skill Courses (VSC) and Skill Enhancement Courses (SEC) integrated into the curriculum. These courses are designed to provide hands-on learning experiences, fostering logical thinking, and nurturing creativity and innovation skills among students.
- Research Areas : Fuzzy Logic, Embedded Controllers, Computer Programming, Human Computer Interface (HCI), Internet of Things (IoT), Machine Learning (ML).

BOARD OF STUDIES**Teaching Faculties****Dr. P. A. Saudagar**

M.Sc., PGDCS, M.C.A, NET, Ph.D.
Co-ordinator
Department of Computer Science
Date of Joining: 02/12/2013

Mr. S. A. Durge

M.Sc, NET, SET, MCA
Assistant Professor
(Contract)

Mr. M. M. Wasu

M.Sc, NET, SET, MCA
Assistant Professor
(Contract)

Dr. S. T. Raut

M.Sc, Ph.D
Assistant Professor
(Visiting)

External Members

- ◆ **Dr. Kavita Khobragade**, Associate Professor and Head, Department of Computer Science, Fergusson College, Pune.
- ◆ **Dr. Mamta Baheti**, Assistant Professor and Head, Department of Computer Science, Hislop College, Nagpur.
- ◆ **Dr. Vishal Lichade**, Director, Softsense Technoserv, Nagpur.
- ◆ **Dr. Mukul Bhonde**, Associate Professor and Head, Department of Computer Science, Shri Shivaji Science College, Amravati.

ABOUT THE DEPARTMENT

The Department of Biotechnology was established in 2006 with the aim of fostering knowledge in students regarding the fundamentals and advancements in the field of biotechnology. The department offers a B.Sc. undergraduate course in Biotechnology (Honors), and a couple of certificate courses. The curriculum includes the study of Biotechnology, along with one of the minor subjects Chemistry/ Microbiology/ Botany/ Zoology. In line with the NEP's emphasis on developing well-rounded individuals, the faculty and students of the department are actively involved in various co-curricular and extracurricular activities. Additionally, the department is committed to inculcating entrepreneurial skills in biotechnology graduates, with the aim of fostering job creators rather than just job seekers. The Department of Biotechnology is dedicated to providing a comprehensive and rigorous education, equipping students with the knowledge and skills necessary to excel in the rapidly evolving field of biotechnology and contribute to the advancement of scientific knowledge and innovation.

HIGHLIGHTS OF THE DEPARTMENT

- Comprehensive and up-to-date curriculum that covers the latest advancements in biotechnology
- Equipped with modern specialized equipment, and resources to support practical learning and experimentation
- Access to research opportunities
- Opportunity to engage with industry partners through internships, projects, and guest lectures
- Offers career guidance and support, helping students to explore various career paths in biotechnology

ACADEMIC PROGRAMMES OFFERED

- **B.Sc. in Biotechnology**
- **Certificate Course***
 - Green Career
 - Certificate Course in fundamentals of Molecular Biology

* Students can enroll and complete certificate courses during their B. Sc. in respective subjects.

HIGHLIGHTS OF THE SYLLABUS UNDER NEP 2020

- Post autonomy, the curriculum has been modified by highly experienced subject experts in consultation with academicians, research scientists and industry personnel to meet the latest requirements of biotechnology industries.
- The syllabus ensures that the students graduating with Biotechnology as one of the subjects will have the academic standard required to pursue post-graduation in Biotechnology in India and abroad.
- Students graduating with Biotechnology will acquire skills that will be of tremendous value to them especially if they choose a career in Research, Academics, or Industry.
- The graduates with Biotechnology will be able to face any national competitive exams held for the graduates will be able to qualify examinations like JAM, CSIR-NET, SET, GATE etc.
- Syllabus contains important topics like Microbiology, Enzymology, Cell Biology, Biochemistry, Molecular Biology, r-DNA Technology/ Genetic Engineering, Immunology, Virology, Fundamental of Biomolecules, Biophysical Technique, PCR (Polymerase Chain Reaction), Bioinformatics, Environmental Biotechnology, Industrial Biotechnology, Food Biotechnology, Tissues Culture, etc. are included in UG syllabi and PG Syllabi of other university.
- Along with the theory, skill-oriented experiments including some innovative projects will prepare the students to orient themselves to bridge the gap between science and technology.

BOARD OF STUDIES**Teaching Faculties****Dr. Mrs. U.A. Malode**

M.Sc., Ph.D.
Coordinator
Date of Joining: 15.06.2012

Dr. K.A. Kale

M.Sc., Ph.D.
Assistant Professor
(Contract)

Miss. Komal Dhumane

M.Sc.
Assistant Professor
(Contract)

Miss. Pallavi Rode

M.Sc.
Assistant Professor
(Contract)

External Members

- **Dr. K.P. Narkhede**, Director, School of Life Sciences, M.J. College, Jalgaon.
- **Dr. D.D. Bhokre**, Associate Professor, Dept. of Microbiology, Shankarlal Khandelwal College, Akola.
- **Dr. R.C. Shah**, Assistant Professor, Department of Microbiology, J.M. Patel College, Bhandara.
- **Dr. Ashish Polkade**, Founder, Bharat Eco Solutions and Technologies.

Photo Gallery

ABOUT THE DEPARTMENT

The Department of Languages has its inception with the establishment of the college in the year 1962, since then it has been consistently providing the students of undergraduate classes a base for English Communication, thereby enhancing their written and spoken aspect as well. Besides Compulsory English, the department offers three options as a second language to its students, i.e. i) Marathi, ii) Hindi and iii) Supplementary English.

Apart from regular curriculum, all the teachers from the department render their valuable guidance to the students participating in various quiz, debate, elocution, essay or poster competitions organized by various colleges or universities round the country.

Highlights of the Department

The department of Languages has a dedicated digital language lab, which helps students a lot while confronting campus recruitment drives conducted by various National and Multinational companies visiting the college. The department is known for excellent performance regarding overall development of students which is reflected in their academics and outstanding results.

Courses :

- Compulsory English
- Marathi
- Hindi
- Supplementary English

Language Lab

The department of Languages runs a digital language lab, wherein a special software has been installed as students' console and teacher's console to improve the accents and overall spoken aspect of the students. Here, students can listen to their own accent, pronunciations through a headphone and rectify their mistakes while speaking. This helps them a lot while confronting campus recruitment drives conducted by various National and Multinational companies visiting the college.

These classes of Language Lab are conducted batchwise in the lectures of tutorials. All the students of B. Sc. Part I are benefitted every year by this Language Lab. Around 250 to 300 students avail benefit of it. At present, 11 computers are dedicated for Language Lab, out of which 1 is a Teacher Console which is also the server of the main software and 10 computers are Student Consoles, all connected in LAN .{Local Area Network} Mr. Rupesh Thombare, assistant professor, department of Languages is the in-charge of it.

BOARD OF STUDIES**Teaching Faculties****Mr. R. K. Thombare**

Head & Assistant Professor
M.A.(Eng.) NET, M.A. (Eco.)
Date of joining: 02.01.2007

Mrs. S.R. Khode

M.A. (Marathi), B.Ed.
(Visiting Faculty)

Mrs. S.R. Dubey

M.A. (Hindi), B.Ed.
(Visiting Faculty)

External Members

- ◆ **Dr. P.P. Deshmukh**, Associate Professor, Mahatma phuley Mahavidyalay, Warud.
- ◆ **Dr. S. G. Kannake**, Associate Professor, Sardar Patel College, Chandrapur.
- ◆ **Dr. M. B. Tomar**, Assistant Professor, G.S. Commerce College, Wardha.
- ◆ **Dr. Rajesh Deshpande**, Associate Professor, SJGSM, Wardha.
- ◆ **Dr. Anilkumar Dubey**, Associate Professor, MGHIU, Wardha.
- ◆ **Ms. Roshni Pathekar**, (Alumni), Assistant Professor, Vidya Vikas College, Samudrapur.



ABOUT LIBRARY

The college library is named after the founder Principal Dr. V.P. Damle is dedicated to fulfilling its mission by acquiring the necessary information and documents to meet the needs of its users, facilitating excellence in teaching and learning. The library operates in a fully computerized environment using customized software 'LIBMAN'. All transactions are automated, and books are equipped with barcodes to ensure accuracy and efficiency. With a focus on technological advancement, the library provides access to an Online Public Access Catalog (OPAC) and the Internet through terminals in the reading room. Spanning an area of 624.325 sq.mt., the library features distinct sections including a Reading Room, Reference Section, Issue Counter, Stack Rooms, and a Bound Volume Room. The reading room has a capacity to accommodate 150 readers, with separate arrangements made for faculty members to utilize the library's resources effectively.

FACILITIES

- Reading Room with Free Internet Access
- Online Public Access Catalog WEB OPAC
- INFLIBNET
- Book issue on Deposit Basis
- Display of New Arrivals

HEALTHY PRACTICES

- CCTV Cameras surveillance in the library
- Orientation sessions for new users
- Display of new arrivals
- Reprography
- Hosting workshops and book exhibitions

STATISTICAL DATA OF LIBRARY

Total Number of Books	45,833
Total Number of Bound Volume	1704
Total Number of Journals	21
Total Number of Periodicals	19
Total Number of Newspapers	18
Total Number of Multimedia Collection	371

Mr. Praful B. Bhojar

M.L.I. Sc., SET, M. Phil
Librarian
Date of Joining: 01.01.2020

Library Website**Web OPAC****NATIONAL ACADEMIC DEPOSITORY, DIGILOCKER AND ACADEMIC BANK OF CREDITS**

Bajaj College of Science, Wardha is registered to National Academic Depository and making students' credential available on DigiLocker portal. The institute's name is populated on the home page of DigiLocker. Till last session, 2516 marksheets of various programs and courses are available online on DigiLocker Portal of Govt. India. Also, every student has unique Academic Bank of Credit ID (ABC ID) where all the academic credits earned by students are uploaded.



ABOUT THE DEPARTMENT

The Department of Physical Education and Sports at Bajaj College of Science has been an integral part of the institution since its establishment in 1962. Dedicated to nurturing both the physical and mental well-being of students, the college boasts a comprehensive Physical Education and Sports department equipped with state-of-the-art facilities for a wide range of indoor and outdoor activities, including a yoga center and a separate gymnasium. The department of Physical Education and Sports is committed to organizing various activities throughout the academic year to enhance students' physical, social, mental, and spiritual capabilities. With a focus on holistic development, the department has invested in developing its infrastructure to cater to a diverse array of sports. Students have access to facilities for sports such as cricket, football, basketball, volleyball, archery, handball, ball-badminton, kabaddi, softball, sepaktakraw, baseball, hockey, Kho-Kho, swimming, and athletics. The college takes pride in its students' active participation in University tournaments for both indoor and outdoor games annually. These tournaments serve as a platform for talent identification and selection of University teams to compete in zonal and National inter university tournaments organized by various universities and sports associations.

SPORTS AND GAMES

OUTDOOR: Cricket, football, basketball, volleyball, archery, handball, ball-badminton, kabaddi, softball, sepaktakraw, baseball, hockey, kho-kho, swimming, athletics.

INDOOR: Badminton, table tennis, carrom, chess

Mr. Vinod Garad
M.P. Ed., SET
Incharge
(Contract)

For More Details



We are committed to providing comprehensive student support services that foster academic success, personal growth, and career readiness. Our student support initiatives are designed to empower students to reach their optimum potential and navigate their academic journey with confidence. Here is an expanded overview of the key aspects of student support:

1. Institution's Innovation Council (IIC):

The Institution's Innovation Council at our college fosters a culture of innovation, creativity, and entrepreneurship among students. The IIC organizes various activities and initiatives to promote innovation on campus including Entrepreneurship Workshops, Innovation Challenges, Incubation Support, Industry Collaborations/visits and more.

For More Details



2. Training and Placement Cell:

The Training and Placement Cell is dedicated to empowering students with the necessary tools and resources to succeed in their chosen career paths. Through workshops, seminars, and mock interviews, we aim to enhance students' employability and confidence. Our team works closely with industry experts and recruiters to bridge the gap between academia and industry, ensuring that our students are well-prepared for the competitive job market.

For More Details



3. Personal Counseling and Internal Complaint Cell:

We offer personal counseling services to support students in managing personal challenges, stress, and emotional well-being, providing a confidential space for individual and group counseling sessions, workshops, and resources. Additionally, our Internal Complaint Cell (ICC) serves as a grievance redressal mechanism for addressing complaints related to harassment, discrimination, or misconduct, ensuring a safe and respectful campus environment through impartial investigations and appropriate actions in line with college guidelines and regulations.

For More Details



4. Alumni Engagement:

Alumni play a crucial role in mentoring current students, sharing their professional experiences, and providing networking opportunities. Through alumni events, career panels, and mentorship programs, students benefit from the wisdom and guidance of successful graduates. The college has a registered alumni association that actively engages with current students and is involved in all necessary bodies, fostering a strong bond between past and present members of our academic community.

For More Details



5. Hostel Facilities:

Our college provides comfortable and secured hostel facilities for students who require accommodation on campus. The hostel rooms are well-maintained and furnished with essential amenities to ensure a conducive living environment for students. Additionally, the hostel staff is available round-the-clock to address any concerns or emergencies that may arise. The hostel also offers recreational spaces, study areas, and common rooms where students can relax and socialize after their academic commitments. Overall, our hostel facilities aim to provide a safe and supportive living environment that complements students' academic experience at our college campus.

For More Details



6. Scholarships, Fellowships and Concessions:

We offer scholarships to merits, and concessions in accordance with the rules set by the Government of Maharashtra. Scholarships are available to eligible students based on their academic performance, financial need, or specific criteria outlined by the government. Merits and concessions are also awarded to deserving students to recognize their achievements and provide financial assistance wherever applicable, ensuring that all students have equal opportunities to pursue their education and succeed in their academic endeavors.

For More Details



7. Student Organizations:

Students are engaged in a variety of student clubs, societies, and organizations to cultivate leadership skills, pursue interests outside the classroom, and build a strong sense of community.

- **Research Innovation Curricular Hours (RICH) Club:**

The Research Innovation and Curriculum Hours (RICH) Club is a vibrant student organization dedicated to cultivating a culture of research, innovation, and academic excellence. By offering opportunities for cutting-edge research, collaboration with faculty, and curriculum development, the club empowers members to enhance critical thinking, expand knowledge, and develop problem-solving skills. Through workshops and projects, students can grow their leadership abilities and contribute meaningfully to their fields. Join the RICH Club for a journey of intellectual growth, innovation, and academic success.

For More Details



- **Astro Club:**

The Astro Club is a dynamic student organization dedicated to fostering a passion for astronomy and exploring the wonders of the universe. Through engaging activities like stargazing events, telescope observations, expert lectures, and discussions on astronomical discoveries, members have the chance to deepen their understanding of space. The club offers a supportive environment for students to learn, ask questions, and share their enthusiasm for space exploration. Whether you're an experienced stargazer or new to astronomy, the Astro Club welcomes all students eager to expand their cosmic knowledge and curiosity.

For More Details



8. College Magazine:

The college magazine serves as a vibrant platform for showcasing the diverse talents and voices within our college community. It is a creative outlet where students, faculty, and staff can express themselves through writing, photography, art, and more. The magazine features a variety of content including student achievements, academic insights, creative works, campus events, and thought-provoking articles on current issues. It not only captures the spirit of our college but also serves as a lasting record of our collective experiences and accomplishments. Through the college magazine, we aim to inspire, inform, and connect our community, fostering a sense of pride and unity among all members.

For More Details



9. Academic Advising and mentoring:

Our dedicated faculties offer guidance on course selection, academic planning, and career pathways, ensuring that students make firm decisions about their education and future endeavors. Acting as mentors, they conduct periodic meetings to address any issues students may face, providing support and assistance when needed.

10. Health and Wellness Programs:

We promote students' well-being through health and wellness programs, including yoga, mindfulness sessions, nutrition education, and mental health awareness campaigns.

CO-CURRICULAR ACTIVITIES

SEMINARS AND CONFERENCES

We regularly organize seminars and conferences featuring renowned speakers, experts, and industry professionals to provide students with insights into the latest trends, research, and developments in their field of study. These events offer a platform for students to enhance their knowledge, engage in discussions, and network with professionals in the industry. Students have the opportunity to present their research, learn from experts, and broaden their understanding of various topics through these academic gatherings.



INTERSHIPS

Internship opportunities are an integral part of our curriculum, allowing students to gain practical work experience in their field of study. We facilitate internships with companies, research institutions, and organizations to provide students with hands-on learning experiences, exposure to real-world challenges, and the opportunity to apply theoretical knowledge in a professional setting. Internships help students develop essential skills, build industry connections, and explore potential career paths while preparing them for the workforce.



WORKSHOPS AND TRAINING PROGRAMS

We conduct workshops and training programs on a variety of topics such as technical skills, soft skills, leadership development, and career readiness to enhance students' competencies and employability. These interactive sessions are designed to equip students with practical skills, industry-relevant knowledge, and professional development opportunities to excel in their academic and professional pursuits. Workshops cover a wide range of subjects to cater to diverse interests and career aspirations among students.



IIT BOMBAY SPOKEN TUTORIAL PROGRAMME

We offer the Spoken Tutorial Programme to all students to enhance students' technical skills in software applications and programming languages. Through interactive tutorials and hands-on training, students develop practical skills in coding, data analysis, graphic design, and more. This programme fosters creativity, problem-solving, and critical thinking skills vital for success in the digital age, enhancing employability and preparing students for future career opportunities.



CAREER KATTA

Career Katta is an esteemed initiative by the Department of Higher and Technical Education, Government of Maharashtra, in collaboration with the Maharashtra Information Technology Support Centre. Our college organizes a wide array of activities under Career Katta to provide students with guidance on career choices, competitive examinations (such as UPSC, MPSC, Banking, SSB, SSC, Police, LIC, etc.), entrepreneurship, skill development, credit earnings under the new CBCS and NEP Curriculum Framework, as well as internship and placement opportunities.



EXTRA CURRICULAR ACTIVITIES

Our college offers a diverse range of extra-curricular activities aimed at enriching the overall student experience. These activities are designed to complement academic learning and provide students with opportunities for personal growth, skill development, and holistic development. From cultural events, sports competitions, and community service initiatives to leadership development programs and creative arts workshops, there is something for everyone to explore and engage in beyond the classroom. Students are encouraged to participate in these activities to enhance their talents, broaden their horizons, and foster a well-rounded personality. Join us in embracing a vibrant campus life filled with excitement, learning, and personal development.

CULTURAL EVENTS AND COMPETITIONS

Our college hosts cultural events, competitions, talent shows, and festivals to celebrate diversity, creativity, and talent among students. These events provide a platform for students to showcase their artistic abilities, cultural heritage, and creative talents while promoting a sense of community and inclusivity on campus. Students can participate in various competitions such as debates, quizzes, music contests, dance performances, and art exhibitions to foster teamwork, creativity, and self-expression.

For more details:



COMMUNITY SERVICE INITIATIVES

We actively engage students in community service initiatives, volunteering programs, and social impact projects to instill a sense of social responsibility and civic engagement. Through these initiatives, students have the opportunity to contribute to society, address community needs, and make a positive impact through service-learning experiences.

We offer a diverse range of student organizations and clubs to promote holistic development and civic engagement. The National Service Scheme (NSS) provides students with opportunities for community service, social outreach, and skill development through various projects and initiatives. The National Cadet Corps (NCC) instills discipline, leadership, and patriotism among students through military training and social service activities. Center for Women Studies and Services (CWSS) focuses on empowering women through discussions, workshops, and advocacy for gender equality and women's rights. The Population Education Club (PEC) raises awareness about population issues, family planning, and sustainable development through educational campaigns, workshops, and outreach programs. The Electoral Literacy Club educates students about the electoral process, voter awareness, and civic responsibility to promote informed and active participation in democratic processes. These clubs provide students with valuable opportunities for personal growth, leadership development, and social impact within the college community and beyond.

By participating in community service activities, students develop empathy, leadership skills, and a deeper understanding of social issues thereby making a difference in the lives of others.

For more details:



SOPHISTICATED ANALYTICAL INSTRUMENTATION FACILITY (SAIF)

About the Facility

SAIF (Formerly Central Instrumentation Center), at Bajaj College of Science, Wardha has been established in the year 2017 with the aim of providing a central facility of latest and advanced analytical techniques for research in various areas of science and technology. It houses several sophisticated and modern analytical equipment offering its users, a wide range of analytical methods/techniques for analysis/testing/characterization enabling them to keep pace with developments taking place globally, publish their research findings in peer reviewed journals and through their concerted efforts contribute to the upliftment of the society at large. This facility can be used by undergraduate, postgraduate, doctoral students and faculty members. The facility is also extended to external organizations, mainly academic institutions in the nearby region, on a chargeable basis. This facility can also be used for organizing short term courses/ workshops on the use and application of various advanced instruments and analytical techniques.

Equipment Available for Testing and Consultancy Services

- Rigaku Miniflex 600 X-ray Diffractometer
- Bruker's ATR mode Fourier Transform Infrared Spectrophotometer
- Shimadzu UV-vis. Spectrophotometer 1800
- Shimadzu's GC-2014C AFsc
- Elementar's Unicube Plus CHNS Analyzer
- Biorad's Polymerase Chain Reaction (PCR)

For more details:



PLACEMENTS AND COLLABORATORS

Our institute prides itself on its robust placement program, ensuring students are well-equipped for the professional world. With regular placement drives and career counseling, students are prepared for success. Collaborations with industry, research and higher education institutes and companies provide unique opportunities for hands-on experience. Additionally, our MoUs and linkages at local and national levels offer students a diverse and enriching academic experience, setting them up for a bright future in the field of science.

Our Collaborative Partner for Industrial and Institutional Research, Training & Placement



PROMINENT ALUMNI



Padma Shri Nivedita Bhide

All India Vice President
of the Vivekananda Kendra,
Kanyakumari



Padma Shri Dr. Abhay Bang

Indian activists and community
health researchers working
in the Gadchiroli district
of Maharashtra, India.



Padma Shri Dr. Ravi Kolhe

Indian social activists and doctors
working for tribal people in
remote village areas of Bairagarh in
Melghat region of Amravati district
in Maharashtra.



Dr. Arvind Sahoo

Executive Director,
Regional Centre for Biotechnology,
Faridabad.



Dr. Jayant Keskar

Director,
Enpro Environtech Pvt.Ltd.,
Australia.



Dr. Rajiv Giroti

Forensic DNA Scientist,
Central Forensic Science Lab, Pune.



Dr. Rajesh Khaparde

Associate Professor,
Academic Faculty Member at
HBCSE-TIFR, Mumbai, India.



Dr. Nishikant Wase

Senior Scientist,
University of Virginia,
School of Medicine, Virginia.



Adv. Kshitija Wadatkar

MD Corporate Law Firm,
Mumbai and Special Counsel,
Bombay High Court, Mumbai.



Mr. Chetan Bakale

Manager,
Reserve Bank of India,
Mumbai.



Dr. Ramakant Sharma

Senior Device Engineer
Quantum Science Ltd.
Darebury, England, UK.



Dr. Praful Singru

Associate Professor,
National Institute of Science
Education and Research,
Bhubaneswar, Odisha, India.



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Alumni of this Decade**

