



PROSPECTUS 2022-23

NAAC A-Grade College
RUSA, MHRD
Institutional Innovation Cell (IIC), MHRD
Study in India, MHRD
CPE (Phase II), UGC



SHIKSHA MANDAL'S BAJAJ COLLEGE OF SCIENCE

(Formerly Known as Jankidevi Bajaj College of Science)
 An Autonomous College Affiliated to RTM Nagpur University

Jamnalal Bajaj Marg, Civil Line, Wardha - 442001 (M.S.)

Phone (Office) : 07152 - 241696, Fax : 07152-230515

E-mail : jbsciencewardha@yahoo.co.in / Website : jbsw.shikshamandal.org



Estd. 1962



Parent Organization Shiksha Mandal

Shiksha Mandal is a century-old institution based at Wardha, the undeclared capital of pre-independence India. Founded by Shri Jamnalal Bajaj, it was deeply influenced by freedom struggle and Gandhiji. Its faculty and students were involved in the freedom movement and one of its institutions was closed by the British. The Nation's first education conference was held in Shiksha Mandal in 1937 and was presided over by Gandhiji. Shiksha Mandal carries on its work of providing quality education, steeped in nationalistic ethos and human values, at an affordable cost. Most of its institutions are affiliated to R. T. M. Nagpur University. Six of its seven institutions are aided by the Government and one upcoming engineering college will be affiliated to Dr. Babasaheb Ambedkar Technological University, (BATU), Lonere. Shri. Shekharji Bajaj, Chairman & Managing Director, Bajaj Electricals Ltd., is its current President. Recently our Management has been honoured with "Ideal Educational Institution Award" from R.T.M. Nagpur University, Nagpur. Eminent Alumni includes Late Shri Madhukar Chaudhary (Ex-Speaker of Maharashtra), Shri Harish Salve and Shri Nitin Gadkari to name a few.

Contact us : Phone : 07152-230506, 230507 / Email : shikshamandal@gmail.com



Shri. Shekharji Bajaj
President, Shiksha Mandal

INSTITUTES RUN BY SHIKSHA MANDAL

Bajaj College of Science, Wardha
(Formerly known Jankidevi Bajaj College of Science)
(Autonomous College - Affiliated to RTMNU)
Accredited 'A' grade by NAAC
Jamnalal Bajaj Marg, Civil Line, Wardha - 442001 (M.S.)
Ph/Fax : 07152-230515 / E-mail : jbsciencewardha@yahoo.co.in

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Email : info@shikshamandal.org

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(Autonomous College - Affiliated to RTMNU)
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E-Mail : astsw@rediffmail.com

Ramkrishna Bajaj College of Agriculture, Wardha
Arvi Road, Pipri, Wardha - 442001
Tel.: 07152-231840 / Email : rbcapipri@gmail.com

Bajaj Institute of Technology, Wardha
Arvi Road, Opposite Ramkrishna Bajaj College of Agriculture,
Pipri, WARDHA-442 001 / Tel.: 07152-255770 Fax: 07152-230507
Email: bit@shikshamandal.com / Web: www.bit.shikshamandal.org



Shri. Sanjayji Bhargava
Chairman, Shiksha Mandal

AUTONOMY: THE QUEST FOR EXCELLENCE

Shiksha Mandal is a pioneering institution. We believe it is the responsibility of good institutions to continually improve themselves and do what is good and right for its students. In the 1940s we started Commerce education in Hindi and Marathi to make it accessible to a larger section of society. Since then all our institutions consider it their obligation to continually develop.

From this year Jankidevi Bajaj College of Science has been rechristened Bajaj College of Science. Shiksha Mandal is a Bajaj educational trust and it would be beneficial for our colleges if they bear the Bajaj name. The name stands for enduring values of ethics, quality, nationalism and social commitment. Jankidevi would continue to inspire us and her spirit guide us. But the world of tomorrow needs change, and we will continually evolve but stay rooted in our core values.

Autonomy has been the next step in adding higher value to our students. It is Shiksha Mandal policy. Bajaj College of Science, maintaining its tradition of being a pioneer within Shiksha Mandal, has received University Grants Commission approval for becoming an Autonomous College from the 2017-18 session, the first such College under RTM Nagpur University. It is only appropriate that the second grant college to become Autonomous in Vidarbha too is from our stable, viz. GS College of Commerce & Economics, Nagpur. I have to compliment the Principal & faculty of Bajaj College of Science, for working so hard to make it work. The feedback from students about it is consistently positive.

Autonomy has allowed us to upgrade the syllabus and make our students better suited for their careers. More importantly, the examination system has been of high quality in the quality of its questions and assessment. Control over examinations also shortens the time spent on examinations and increase the academic input; and more importantly allows results to be announced well in time.

There were apprehensions that Autonomy would lead to dilution of academic standards and sharply increased fees. In our case neither has happened.

By opting for Autonomy, we have subjected ourselves to some legitimately high standards of accountability. With the moral and professional integrity of our own faculty, we wish to place this institution on par with the most sought-after autonomous ones in the country for the sheer employability of their students.

Our Inspiration
The Late Mata Jankidevi Bajaj, Padma Vibhushan
(1893 - 1979)

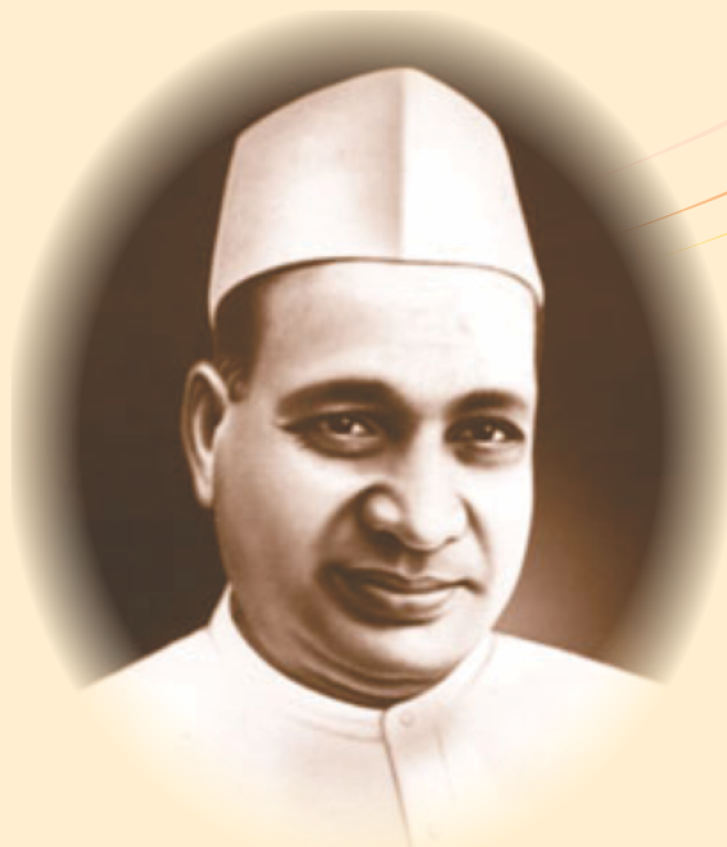


Jankidevi was as much a persona in her own right, as she was a dedicated wife to Jamnalalji. She didn't think twice before giving up her luxurious lifestyle when Jamnalalji adopted the Gandhian way of life. In the fight for her motherland's freedom, she even discarded foreign clothes and took to *swadeshi* and *khadi*. A progressive woman in thought, Jankidevi opposed orthodox customs of parda and untouchability and worked towards the upliftment of women.

After Jamnalalji's demise, and at the insistence of Gandhiji, Jankidevi committed herself to the cause of Go-seva becoming the President of the Goseva Sangh. She actively took part in Vinoba Bhave's 'Bhoodan' movement i.e. donation of land for the landless. Her innovative mind gave the idea of koopdan and she sought donation of wells from house to house. A revolutionary in spirit, Jankidevi undertook padyatras with Vinoba Bhave and was also actively involved in the Bhoodan, Koopdan, Gram Seva and Go-seva movements in post-independence period.

In recognition of her lifelong work, the Government of India honoured her with the Padma Vibhushan in 1956. In 1980, the Jamnalal Bajaj Foundation instituted a special award in her memory for women who are selflessly contributing for the development and welfare of women and children. The aura of her name continues to inspire every individual on the campus to work with a high level of dedication and commitment.

Our Inspiration
The Late Shri. Jamnalalji Bajaj
(1889 - 1942)



History isn't created overnight. Enterprises aren't built in a day. It takes a visionary to lead a movement that profits the nation, a foresight followed by planning and years of perseverance. Shri Jamnalal Bajaj was one such visionary. His name is integral to the freedom struggle as well as to the Bajaj Group of Companies for sheer earnestness, single-minded commitment, depth and breadth of contribution and making words into deeds.

Humanitarian, freedom fighter, philanthropist, social reformer and a devoted Mahatma Gandhi follower, Jamnalalji was adopted as the fifth son by Gandhiji. He was the alter ego of the Mahatma in the Gandhian constructive movement. He took active part in the Indian freedom struggle. Jamnalalji also undertook pioneering work in the field of Go-seva (cow protection), upliftment of the dalits, education of women, propagation of Hindi, spread of Khadi and the development of village industries.

As an industrialist and a businessman, Jamnalalji was singular in enunciating for himself a strict code of ethics. He earnestly tried to practice the Gandhian ethic in every sphere of his life – political, social, business and personal.

With the sole aim of nation building Jamnalalji established Shiksha Mandal in 1912. Deeply influenced by Gandhiji, the faculty and students of Shiksha Mandal were involved in freedom movement. In 1937, Gandhiji presided over nation's first educational conference at Shiksha Mandal. Following the footsteps of Shri. Jamnalalji Bajaj, Shiksha Mandal has progressed to such an extent that it has been honoured with "Ideal Educational Institution Award" by RTM Nagpur University, Nagpur.

Our Inspiration
The Late Shri Kamalnayanji Bajaj
(1915 - 1972)



In 1942, at the young age of 28, on the demise of Jamnalalji, his son Kamalnayanji took on the mantle of head of the group. Kamalnayan Bajaj wore many hats effortlessly in his lifetime - thinker, politician, philanthropist and entrepreneur. Raised under the inspirational umbrella of Gandhian principles and values inculcated by his guru Acharya Vinoba Bhave, he returned to India after studying at the University of Cambridge and put his heart into carrying forward the family business. At the same time he joined the fight against the British Raj alongside his mentor Mahatma Gandhi. He devoted himself not only to numerous social causes like education, medical care, famine and flood relief, but also to the promotion of Indian tradition in the form of art, crafts, literature and Ayurveda. He served as a MP from Wardha from 1952 to 1971.

As a member of the company's Board of Directors from 1946 to 1956 and Chairman from 1956 to 1970, he took the family business to the next level by branching out into manufacture of 2 & 3 wheelers, cement, electrical and ayurvedic products. He also started a travel agency.

Under his leadership Shiksha Mandal established the first Science College of Wardha District at Wardha, named after Mata Jankidevi Bajaj. Today, Jankidevi Bajaj College of Science, Wardha is a pioneer in many ways. It's the first college in Vidarbha & third in Maharashtra to get NAAC accreditation, the first science college in Vidarbha to be ranked in top 100 in the first NIRF ranking and the first science college in Vidarbha to receive Academic Autonomous Status.

At the Helm Dr. Om A. Mahodaya, Principal



Dear All,

At this juncture, when we have conquered the Pandemic, we need to be focussed on a such a mode of learning which would give impetus to our critical thinking as Pandemic has changed education around the World. On one hand, the implementation of NEP (National Education Policy) from 2022 onwards may bring many transformations in education sector. On the other, the educational scenario has changed dramatically with distinctive rise in e-learning whereby teaching-learning practice is undertaken remotely. In future, no one knows whether the post-pandemic education system may change the teaching-learning activity into an online or even a hybrid mode.

We do not have to get disheartened with this change. This sudden shift has the positive effects too, especially with respect to the specific information and learning. Some of the educational sectors significantly demand a set of online learning platforms as it has fewer financial burdens maintaining logical and current information required by the students while other veterans believe that the offline mode of learning is only the best one

The vision of Bajaj College of Science in this new education system is to ensure that it will touch the life of each and every student and contribute to many growing development imperatives on one hand and create a just and an equitable society on the other hand be it an online or offline or even hybrid one.

Bajaj College of Science is autonomous since 2017. I am sure, Autonomy has been considered as an important milestone in the history of our Institute. Shiksha Mandal and ultimately, Bajaj College of Science have been adopting policies which are beneficial and conducive in the welfare of students' fraternity. The sapling of autonomy has begun to transform in a tree of knowledge and its fruits have been begun to appear steadily. We are in the realm of ecstasy today as we have been winning over many challenges on day to day basis. We are observing and experiencing the tremendous resultant output time to time gradually.

There is no dearth of material, man-power and organizations but different set of thinking needs to be applied for setting new benchmarks for quality enhancement. There is an urgent need to redefine each existing benchmark. We are committed to the inspirational goals of 21st century as they are the goals of new education. We, the educators, have taken this challenge and now it is your turn to accept this transformation and get success.

Let us embark on this journey and successfully reach our destination through the challenging but exploratory voyage of a new education with the help of new education policy.

Happy Learning!!!!

GOVERNING BODY MEMBERS

Number	Category	Nature	Name of the Member
5 Members	Management	Trust or management as per the constitution or byelaws, with the chairman or president/ director as the chairperson	Shri. Shekharji Bajaj President, Shiksha Mandal, Wardha. (Bajaj Electricals Ltd., Akurdi, Pune – 35)
			Shri. Sanjay Bhargava Chairman, Shiksha Mandal, Wardha
			Shri. P.D. Khemuka Joint Secretary, Shiksha Mandal, Wardha
			Shri. Anurag Bajaj Member, Shiksha Mandal, Wardha
			Dr. Arvind Sahu Scientist G, NCCS, Pune
2 Members	Teachers of the College	Nominated by the Principal based on seniority by rotation	Dr. V. V. Shinde , Head, Department of Electronic Dr. S. H. Bagade , Head, Department of Physics
1 Member	Educationist or industrialist	Nominated by the management	Prof. Dr. W. N. Gade Ex. Vice Chancellor, Savitribai Phule Pune University, House No. 4, Road No. 5, Gurudatta Colony, Walhekarwadi, Chinchwad, PUNE - 411 003
1 Member	UGC Nominee	Nominated by the UGC	Dr. (Mrs) Seema Jain Principal, Jain Kanya Pathshala PG College, Meerut Road, Muzaffar Nagar, (U.P.) INDIA - 251001
1 Member	State Government Nominee	Academician not below the rank of professor or State Government official of Directorate of Higher Education / State Council of Higher Education	
1 Member	University Nominee	Nominated by University	Dr. Anjali Rahatgaonkar Director , Government Institute of Science, Nagpur.
1 Member	Principal of College	Government official	Dr. Om Mahodaya Principal, J.B. College of Science, Wardha

ACADEMIC COUNCIL MEMBERS (2021 - 2022)

Number	Category	Nature	Name of the Member
1 Members	Principal	The Principal (Chairman)	Dr. Om Ashok Mahodaya
All the Heads of Department in the College	HOD		1) Dr. S. H. Bagade , HOD, Physics 2) Dr. P. V. Tekade , HOD, Chemistry 3) Dr. P. F. Dhabarde , HOD, Botany 4) Dr. M. R. Chandrakar , HOD, Zoology 5) Dr. Mrs. S. S. Khandare , HOD, Microbiology 6) Dr. S. S. Zade , HOD, Mathematics 7) Dr. V. V. Shinde , HOD, Electronics 8) Dr. U. A. Malode , Coordinator, Biotechnology 9) Dr. P. A. Saudagar , Coordinator, Computer Science
4 Members	Teachers of the College	Four teachers of the college representing different categories of teaching staff by rotation on the basis of seniority of service in the college.	1) Shri. R. T. Katre 2) Dr. A. D. Theng 3) Shri. N. A. Barwat 4) Dr. D. D. Naik
4 Members	Industry, Commerce, Law, Education, Medicine, Engineering, Sciences etc.	Not less than four experts / academicians from outside the college representing such areas as Industry, Commerce, Law, Education, Medicine, Engineering, Sciences etc., to be nominated by the Governing Body.	1) Shri. Makarand Pathan , Wardha (Engineering) 2) Shri. Rajendra Bhutada , Wardha (Commerce) 3) Shri. Rajesh Khaparde , Mumbai (Scientist/Alumni) 4) Dr. D. K. Agrawal (Education)
3 Member	University Nominee	Three nominee of the university not less than Professors	1) Dr. M. P. Dhore , Principal, Shivaji Science College, Nagpur Email : shivajiscience_ngp@yahoo.com, mpdhore@rediffmail.com Mobile : 9423103043 2) Dr. Jeevan R. Dontulwar , Principal, Shri. Mathuradas Mohata Science College, Umred Road, Nagpur. Email : mohatacollege@yahoo.in Mobile : 0712- 2744992 3) Dr. Santosh V. Kasbekar , Dada Ramchand Ramchand Bakharu, Sindhu Mahavidyalaya, Nagpur - 440017 Email : principal@smvnagpur.ac.in principalsmvnagpur@yahoo.in Mobile : 91 712- 2640368, 2642789
1 Member	Faculty Member	A faculty member nominated by the Principal (Member Secretary)	Dr. P. V. Tekade , Head, Dept. of Chemistry

GAINS FROM AUTONOMY

- Student-centric approach
- More skillful teaching and learning
- Supportive learning environment to students
- Freedom to determine our own courses of study and syllabi
- Freedom to implement novel methods of conducting examinations and evaluation
- Inclusion of quality Internal assessment comprising of class test, MCQs, students' seminar
- Introduction of Instrumentation training course for students as a part of course work
- Improvement in teaching and learning process
- Timely Declaration of results
- Creating strong feedback system
- Enhanced Co-curricular and Extra Curricular Activities
- Projects for acquiring more practical knowledge
- Internship programme for meritorious students at National Institutes

1. UNDERGRADUATE PROGRAMME : (BACHELOR OF SCIENCE)

PROGRAMMES	INTAKE CAPACITY
Mathematics Group	
A) Physics, Chemistry, Maths (PCM)	40
B) Physics, Electronics, Maths (PEM)	40
C) Physics, * Computer Science, Maths (PCsM)	20
D) Electronics, * Computer Science, Maths (ECsM)	20
Biology Group	
A) Chemistry, Botany, Zoology (CBZ)	60
B) Chemistry, Botany, Microbiology (CBM)	40
C) Chemistry, Zoology, Microbiology (CZM)	40
D) Chemistry, Botany, * Biotechnology (CBBt)	20
E) Chemistry, Zoology, * Biotechnology (CZBt)	20
F) Chemistry, Microbiology, * Biotechnology (CMBt)	20

* Self financed (Unaided Subjects)

2. POSTGRADUATE PROGRAMME : (MASTER OF SCIENCE)

PROGRAMMES	INTAKE CAPACITY
A) M.Sc. (Botany)	22
B) M.Sc. (Chemistry)	22
C) M.Sc. (Microbiology)	22
D) M.Sc. (Zoology)	22
E) M.Sc. (Mathematics)	22

All P.G. programmes are self financed & runs on non-grant-basis

3. DOCTORAL PROGRAMME : Ph.D.

SUBJECT	No. of Ph.D. SUPERVISORS
A) CHEMISTRY	4
B) BOTANY	3

4. CERTIFICATE COURSES for UG and PG STUDENTS

SELF FINANCED ADD ON COURSES	DEPARTMENT
A) Herbs and Herbal Products	Botany
B) Clinical Laboratory Technology	Microbiology
C) Certificate Course in Statistical analysis using R	Botany
D) Nanoscience and Nanotechnology	Physics
E) Vermicompost Technology	Zoology
F) Clinical Research	Microbiology

**UNDERGRADUATE DEGREE PROGRAMME (B. Sc.)
For Admission in Semester I**

A candidate for being eligible for admission to the three years integrated programme leading to the degree of Bachelor of Science (B.Sc.) must have passed the Higher Secondary School Certificate (H.S.C.) Examination conducted by Maharashtra State Board of Secondary and Higher Secondary Education with science subjects Physics, Chemistry, Biology, Mathematics & Statistics OR Geology OR Geography OR Economics OR Psychology.

OR The candidate must have passed an examination of another Board or University recognized as equivalent to H.S.C. Examination conducted by Maharashtra State Board of Secondary and Higher Secondary Education.

Essentials for Admission:

- Two recent passport sized photographs
- Original and two photocopies of School/College Leaving Certificate
- Original and three photocopies of H.S.C. marksheet
- Copy of caste certificate
- Copy of Non-creamy layer certificate (For OBC/NT/SBC) students
- Eligibility or Migration Certificate (For other Board/University)
- Gap Certificate (If necessary)
- Sports Certificate
- Maharashtra State Domicile Certificate (Failure to produce this, candidate will not be considered for any reservation)
- Affidavit on stamp paper of Rs. 100/- for Linguistic Hindi Minority students in following proforma given below.

Proforma of Affidavit to be Submitted by Linguistic Minority Students Only

महाविद्यालय में प्रथम प्रवेश के समय हिन्दी भाषी (हिन्दी मातृभाषा वाले) छात्र तथा उसके माता या पिता से लिये जानेवाले शपथपत्र का नमूना (₹ १००/- के स्टैम्प पेपर पर)

मैं _____ उम्र _____ व्यवसाय _____
तथा मेरा पुत्र / पुत्री _____ उम्र _____ व्यवसाय _____ रहवासी _____
शपथ पूर्वक कहते हैं कि हम हिन्दी भाषी हैं और जाति से _____ हैं। तथा महाराष्ट्र में क्रमशः _____ वर्ष और _____ वर्ष से निवासी हैं।
हमारी मातृभाषा _____ है। तथा हम और हमारा परिवार _____ भाषा घर में और व्यवहार में उपयोग में लाते हैं जो
भारत सरकार द्वारा घोषित ८ वे शेड्यूल के पार्ट 'ए' में उल्लेखित हिन्दी भाषा के अंतर्गत समाविष्ट है। हम हिन्दी भाषी हैं इसलिए यह
शपथ पत्र आज दिनांक _____ को _____ (शहर का नाम) में किया है।

सत्यापन

मैं _____ उम्र _____ व्यवसाय _____
एवं मेरा पाल्य _____ उम्र _____ व्यवसाय _____ (दोनों का पता) _____

प्रतिज्ञापूर्वक सूचित करते कि उपरोक्त शपथ पत्र में लिखा हुआ मजमून हमारे कहे मुताबिक लिखा गया है। उसे हम दोनों ने पढ़कर देखा है।
उपरोक्त जानकारी सत्य एवं सही है। यदि इसमें कोई अंतर आता है उस स्थिति में हम दोनों व्यक्तिगत रूप से और संयुक्त रूप से कानूनी तौर
पर न्यायालयीन कार्यवाही के लिए जिम्मेदार रहेंगे। अतः आज दिनांक _____ को यह शपथपत्र लिख रहे हैं और इस शपथपत्र
पर हस्ताक्षर किये हैं।

स्थान :

दिनांक :

पुत्र / पुत्री के हस्ताक्षर

माता / पिता के हस्ताक्षर

1

- Visit Bajaj College of Science and obtain admission form and Prospectus OR Visit the college website <http://jbsw.shikshamandal.org/> for admission form
- Fill up the admission form carefully

2

- Attach the photo copies of leaving Certificate, HSC Marksheet, Gap Certificate, Affidavit for Minority, Caste Certificate, Ex-Servicemen Certificate, Physically handicapped Certificate, Sports Certificates, etc. (whichever applicable) to the admission form.
- Submit all these documents to the Admission Committee 2019-20, Bajaj College of Science, Civil Lines, Wardha (MS) - 442001 well before the last date.

3

- Merit list will be displayed on the notice board of the college.
- Note down the important dates and follow the instructions related to admission process

4

- If your name appears in the provisional list or merit list, report to the admission committee along with all necessary documents in original with THREE sets of photocopies of all these documents and three recent passport size color photograph on respective date.
- Wait in the admission hall till the announcement of your name.
- Submit the original documents for verification and further admission process*

5

- After successful verification of the original documents, fill the enrollment form.
- Visit to the admission in-charge, finalise your admission, pay the required fee.
- Get the admission receipt and report to the admission committee again for confirmation.
- Get your College Roll number.

6

- Congratulations! You have made it to the Bajaj College of Science, Wardha.
- Get your uniform stitched.
- Attend the classes regularly.
- Have a habit of daily visit to library.

* At this stage, if any discrepancies are found, your application will be rejected and admission committee will not be responsible for the errors committed by you while filling up the form.

- 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 eight Schedule to the constitution of India, following languages are grouped under 'Hindi' language

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

SCHEME OF TEACHING

CREDIT BASED SYSTEM (CBS)

Subject	Theory/ Practical	No. of Lectures per week	No. of Tutorials / Remedial Classes (per batch)	Internal Assesment (Max. Marks)	Semester End Exam. (Max. Marks)	Min. Passing Marks	Total Marks	Alloted Credits
Compulsory English	Theory	4	1T	15	60	30	75	3
Supp. Eng./ Marathi/ Hindi	Theory	3	Nil	15	60	30	75	3
Physics	Theory	6	1/2 T	20	100	48	150	6
	Practical	6 per batch	Nil	Nil	30	12		
Electronics	Theory	6	1/2 T	20	100	48	150	6
	Practical	6 per batch	Nil	Nil	30	12		
Mathematics	Paper-I	4	1T	15	60	60	150	6
	Paper-II	4	1T	15	60			
Computer Science	Theory	6	1/2 T	20	100	48	150	6
	Practical	6 per batch	Nil	Nil	30	12		
Chemistry	Theory	6	1R	20	100	48	150	6
	Practical	6 per batch	Nil	Nil	30	12		
Botany	Theory	6	1R	20	100	48	150	6
	Practical	6 per batch	Nil	Nil	30	12		
Microbiology	Theory	6	1R	20	100	48	150	6
	Practical	6 per batch	Nil	Nil	30	12		
Biotechnology	Theory	6	1R	20	100	48	150	6
	Practical	6 per batch	Nil	Nil	30	12		
Zoology	Theory	6	1R	20	100	48	150	6
	Practical	6 per batch	Nil	Nil	30	12		

T: Tutorial R: Remedial

EXAMINATION SCHEME AT GLANCE ODD Semesters (Sem. I, III, V)

Regular Exam (Regular + Ex. Student)	Supplementary Exam
October/November	February / March
Result	Result
December	April

EVEN Semesters (Sem. II, IV, VI)

Regular Exam (Regular + Ex. Student)	Supplementary Exam
March / April	June
Result	Result
April	December

INTERNAL ASSESSMENT FOR THEORY

A. For the subjects Compulsory English, Supplementary English, Marathi, Hindi and Mathematics:

Sr. No.	Evaluation Type	Marks
1	Assignments	4
2	Class Test(s)	8
3	Instructional deliveries (case studies/ seminar/ presentation), Overall conduct as a responsible learner, manners, sincerity, skill in articulation, leadership qualities demonstrated through organizing co-curricular activities, Active participation in routine class, etc.	3
Total		15

B. For the subjects Physics, Electronics, Computer Science, Chemistry, Botany, Microbiology, Zoology and Biotechnology:

Sr. No.	Evaluation Type	Marks
1	Seminar	5
2	Unit Test(s)	5
3	Assignments	5
4	Overall Performance (based on overall conduct as a responsible learner, manners, sincerity, skill in articulation, leadership qualities demonstrated through organizing co-curricular activities, Active participation in routine class, etc.	5
Total		20

Grade Awards: Seven Points rating scale is used for the evaluation of the performance of the student to provide letter grade for each course.

Marks obtained out of 150	Marks obtained out of 100	Marks obtained out of 75	Marks obtained out of 25	Grade Point	Grade	Remarks
136 - 150	91 - 100	68 - 75	23 - 25	10	O	Outstanding
121 - 135	81 - 90	61 - 67	21 - 22	9	A+	Excellent
106 - 120	71 - 80	53 - 60	18 - 20	8	A	Very Good
91 - 105	61 - 70	46 - 52	16 - 17	7	B+	Good
76 - 90	51 - 60	38 - 45	13 - 15	6	B	Fair
61 - 75	41 - 50	31 - 37	11 - 12	5	C	Average
= 60	= 40	= 30	= 10	4	P	Below Average
< 60	< 40	< 30	--	0	F	Fail
Absent	Absent	Absent	--	0	AB	Fail

Computation of Semester Grade Point Average (SGPA) for each semester:

$$\text{SGPA} = \frac{(\text{Credits in the subject} \times \text{Grade Points Obtained})}{\text{Total Credits in the Semester}}$$

Computation of Cumulative Grade Point Average (CGPA) after completion of Program:

Sem-I		Sem-II		Sem-III		Sem-IV		Sem-V		Sem-VI	
Credits	SGPA	Credits	SGPA	Credits	SGPA	Credits	SGPA	Credits	SGPA	Credits	SGPA

$$\text{CGPA} = \frac{(\text{Credits} \times \text{SGPA})}{\text{Total Credits in the Program}}$$

ACADEMIC CALENDAR (2021 - 2022)

Shiksha Mandal's
Bajaj College of Science, Wardha
Tentative Academic Calendar for the session 2022-2023
 (As per RTM Nagpur University, Nagpur Academic Calendar)

	Session	Months	Events/Activities
Academic Part	Odd Semester Session from 23rd June 2022 to 20th October 2022		
	2022-23	23 rd June 2022	Commencement of Odd Semester of B.Sc Sem III and Sem V and M.Sc. Sem III Classes
		July	Admission of Odd Semester B.Sc I and M.Sc. I
		August	Commencement of Odd Semester of B.Sc Sem I and M.Sc. Sem I Classes
	Even Semester Session from 15th December 2022 to 30th April 2023		
Curricular/ Cocurricular/ Extracurricular Activities		August	1. Independence Day Celebration 2. Motivational Talks
		September	1. Teachers Day Celebration 2. International Literacy Day 3. Quiz Competition 4. Seminars Competitions 5. Webinars/Seminars 6. Internal Class Exam (ICE-I)
		October	1. Mahatma Gandhi Jayanti 2. Internal Class Exam (ICE-II) 3. Impact Lecture Series Session-I 4. Small Projects
		December	1. NSS Camp 2. Aids awareness programmes
		January	1. Republic day celebration 2. Internal Class Exam (ICE-I) 3. Quiz Competition 4. Seminars Competitions
		February	1. Small Projects 2. College Day Function 3. Scintillation

* Winter and Summer Vacations will be as per the Academic Calendar of RTM Nagpur University, Nagpur.

ABOUT THE DEPARTMENT

Department of Botany was established in 1963. Dr. V. P. Damle was the founder Principal and Mrs. K. V. Damle, the founder Head of Botany Department. Since its inception, the department is recognized for teaching and research in the various areas of Botany. M.Sc. program was initiated in 2003-04. Department has undertaken research projects financed by UGC, DBT, DST and other agencies in Plant physiology, Algae, Medicinal Plants, Paleobotany, Ethnobotany and Taxonomy. Faculty members have active collaborations with scientists from National Institutes and NGOs. Department has received a status of recognized research centre by RTM Nagpur University, Nagpur in 2012. Department imparts quality education at B.Sc., M.Sc. and Ph.D level.

GLIMPSES OF THE DEPARTMENT

- Well equipped labs with sophisticated instruments.
- Separate Plant Tissue Culture Laboratory.
- Certificate course in "Herbs and Herbal Products"
- Ms. Trupti Jagtap (2011-2012) and Mr. Chetan Shriwas (2012-2013) achieved 1st Merit positions in M. Sc. exams of RTM Nagpur University, Nagpur.
- Two recognised faculties as Ph.D supervisors.
- Three students awarded Ph.D and two students submitted Ph.D thesis.
- Three major and two minor research projects funded by UGC are completed.
- Consultancy services provided in a) Identification of medicinal plants and Algae b) Photomicrography.

MAJOR INSTRUMENTS

Cooling Centrifuge, Tilak Air Sampler, Industrial Refrigerator Chiller and Deep Freezer -80°C, Laminar Air Flow, Incubator Shakar, UV-Visible Spectrophotometer



SYLLABUS HIGHLIGHTS

B.Sc. Programme overview:

Department conducts theory and practical sessions on various topics in Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms, Palaeobotany and Morphology of Angiosperms for B.Sc.I. The papers for B.Sc.II include Angiosperm Taxonomy, Cell Biology, Plant Breeding, Anatomy, Embryology, Genetics and Molecular Biology. The B.Sc.III includes papers in Biochemistry & Plant Physiology, Plant Ecology, Plant Biotechnology, Biotechniques and Plant Utilisation. Throughout this B.Sc. programme, students are encouraged to see blending of field and laboratory based teaching and research which makes them equipped for agri- and plant-based industries like plant tissue culture labs and hybrid seed companies.

M.Sc. Programme overview:

Department conducts theory and practical sessions for M.Sc.-I in Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms, Paleobotany, Cytology & Genetics, Biochemistry & Plant Physiology, Cell & Molecular Biology, Plant development and Angiosperm Morphology. The other papers conducted for M.Sc.-II include Plant Ecology, Angiosperm, Aesthetic Botany, Advanced Cell & Molecular Biology, Plant Biotechnology and Plant Resources. Department offers two specialised subjects in 3rd and 4th semester i.e. a) Molecular Biology & Plant Biotechnology and b) Applied Mycology & Plant Pathology. Apart from these papers, students also carry out research work and prepare research thesis as a part of their curriculum. The theoretical and practical content of M.Sc. (Botany) enables students to get job opportunities in academic and research sectors apart from agri-based industries.

TEACHING STAFF

Name

Designation

Qualification

Experience

Dr. P. F. Dhabarde

Assistant Professor, Incharge

M.Sc., Ph.D

17 yrs

Name

Designation

Qualification

Experience

Dr. L. P. Dalal

Associate Professor

M.Sc., M.Phil., B.Ed., Ph.D

32 yrs

Name

Designation

Qualification

Experience

Dr. D. D. Naik

Assistant Professor

M.Sc., Ph.D

7 yrs

Name

Qualification

Experience

Dr. Swati N. Kalode

Assistant Professor (Contract Basis)

M.Sc., M.Phil., B.Ed., Ph.D

13 yrs

Name

Designation

Qualification

Experience

Dr. Arati Pranjale Ghuse

Assistant Professor (Contract Basis)

M.Sc., Ph.D.

05 yrs

Name

Designation

Qualification

Dr. A.A. Maheshwari

Assistant Professor

M.Sc., NET, Ph.D.

2.5 yrs

PHOTO GALLERY



"Botany the eldest Daughter of Medicine"

ABOUT THE DEPARTMENT

Chemistry is the central science. 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.

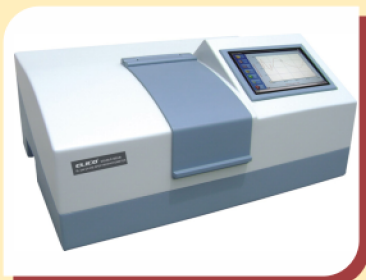
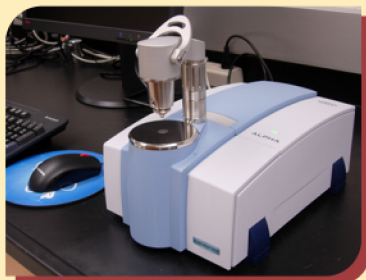
Besides teaching, faculty members are also involved in research activities and have published papers in National and International peer reviewed journals. They have successfully completed nine minor research projects funded by UGC.

GLIMPSES OF THE DEPARTMENT

- Well equipped laboratories and instrumental facility, Exposure of sophisticated instruments to the students through Skill enhancement programme
- Recognition of laboratory as a place for higher learning and research.
Five students awarded Ph.D. degree from our Department, 1 submitted thesis & 3 are working.
- Department undertakes various activities viz. guest lecturers educational tour, students' seminars etc under the banner of chemical society.
- Students consistently qualifying NET, SET, GATE, IIT-JAM exams. (29 B.Sc. students cleared IIT-JAM examination & 8 M.Sc. students cleared NET/SET/GATE examination.)
- Department has continued IIT-JAM, NET-SET, guidance cell for UG & PG Students.
- Students participating in intercollegiate seminars, quiz, elocution, conferences, workshops etc.
- Placement of students to various industries
- Department has implemented micro scale level practical at UG level, to certain extents which saves lot of chemicals.
- Department offers consultancies for FTIR, Flame Photometer, UV -Visible Spectrophotometer, water - soil analysis.
- Department has implemented Moodle online Learning Management Systems (LMS) since 2017.
- Department has started Skill-based Certificate Course in "Industrial Wastewater Management" in collaboration with St. Xavier's College, Mumbai. 36 UG & PG Students from the college and outside the college are admitted to this course.
- One day webinar on "Motivational talk by Successful Entrepreneur" (Resource person: Mr. Arun Waze, Founder Chairman, Anil Cottage industry, Wardha) was organised in association with IIC to celebrate "World Entrepreneurs' Day" on 27th August 2021.
- To inculcate knowledge about Starts-up, IPR and Entrepreneurship, Impact Lecture Series-Session on "Intellectual Property Rights (IPR) and Entrepreneurship" was organized in association with IIC on 22nd September 2021.
- "Workshop on Fire safety" was organised, where team of Fire Brigade, Nagar Parishad, Wardha provided Hands-on-training on fire extinguisher, minimization of fire accidents, career opportunities in fire science on 12th March 2022.

MAJOR INSTRUMENTS

Fourier-Transform Infra-red spectrophotometer, U/V -Visible Spectrophotometer, Flame Photometer, Polarograph, Guoy's Balance, Centrifuge machine (16000 rpm), Microwave Synthesis set up, Rota Evaporator



SYLLABUS HIGHLIGHTS

Syllabus provides comprehensive knowledge of chemistry (theory & practicals) 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
- Photochemistry/ Pericyclics
- Environmental Chemistry
- Analytical Chemistry
- Green Chemistry
- Organometallics
- Instrumental Analysis

TEACHING STAFF

Name
Designation
Qualification
Experience

Dr. O. A. Mahodaya
Principal
M.Phil, Ph.D., B.Ed, FICS
36 Yrs

Name
Designation
Qualification
Experience

Dr. P. V. Tekade
Associate Prof. & Incharge
M.Sc., B.Ed., SET, NET,
GATE, Ph.D.
18 Yrs

Name
Designation
Qualification
Experience

Dr. Mrs. N. P. Mohabansi
Assistant Professor
M.Sc., B.Ed., SET, Ph.D.
19 Yrs

Name
Designation
Qualification
Experience

Dr. K. M. Dadure
Assistant Professor
M.Sc., M.Phil., Ph.D., B.Ed.
15 Yrs

Name
Designation
Qualification
Experience

Mr. M. D. Bansinge
Assistant Professor
M.Sc., NET
09 Yrs

Name
Designation
Qualification
Experience

Mr. N. A. Barwat
Assistant Professor
M.Sc., SET, NET
09 Yrs

Name
Designation
Qualification
Experience

Dr. P. G. Borkar
Assistant Professor
M.Sc., SET, NET, GATE,
Ph.D., Post Doc
06 Yrs

Name
Designation
Qualification
Experience

Dr. A. V. Nakhate
Assistant Professor
M.Sc., NET, GATE, Ph.D., Post-Doc.
2.5 Yrs.

Name
Designation
Qualification
Experience

Dr. Mahejabeen A. Haque
Assistant Professor
M.Sc., B.Ed., SET, Ph.D.
2.5 Yrs.

Name
Designation
Qualification
Experience

Mrs. Bhagyashree Tale
Assistant Professor (Contract Basis)
M.Sc., SET, B.Ed., PGDAC
09 Yrs

Name
Designation
Qualification
Experience

Ms. Monali Awchat
Assistant Professor (Contract Basis)
M.Sc., GATE, NET, SET
03 Yrs

PHOTO GALLERY



"Molecules rule the Universe, we rule the Molecules"

ABOUT THE DEPARTMENT

Since the inception of the college, in year 1962, the Department of Zoology has been established as a leading centre 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 3 years UG (B.Sc. course) and 2 years PG course. Laboratory has been upgraded with audio-Visual facility. Department has up-to-date departmental library with latest edition of books, internet facilities for students and well established museum of local fauna having unique collection.

GLIMPSES OF THE DEPARTMENT

- Teaching faculties with different specializations.
- Group Projects.
- Hands on trainings for students.
- Workshop for students skill enhancement
- Educational tours.
- Upgraded laboratory with latest instruments and animal cell culture laboratory.
- Up-to-date departmental library, internet facilities for students and well established museum.

MAJOR INSTRUMENTS

Trinocular Research Microscope, Digital cell Image analysis system, Double beam U. V. Visible Spectrophotometer, Magnus inverted microscope, Microfilt Biosafety Cabinet class II Type A2, CO₂ Incubator Water jacketed series, Cooling Centrifuge, Cryostat.



SYLLABUS HIGHLIGHTS

At Undergraduate Level :

Theory and practicals related to Animal Diversity –Non chordates ; Environment Biology & Ecology; Cell Biology ; Animal Diversity (Chordates) & Evolution; Genetics; Developmental Biology; Molecular Biology and Immunology; General Mammalian Physiology; Bio molecules, Biotechnology and animal cell culture will be included. Projects would also be part of practical. The syllabus has been reframed considering students should be able to clear competitive exams and should be able to opt for higher studies.

At Postgraduate Level :

Theory and practicals related to Invertebrates; Physiology Cell Biology and Genetics ; Reproductive Biology ; Vertebrates ; Molecular Biology and Biotechnology; Parasitology and Immunology; Entomology ; Fish and Fisheries; Bio-technique, Bio statistics, Ethology, Toxicology and Bio informatics . Projects would also be part of practical. The syllabus has been reframed considering students should be able to clear competitive exams and should be able to opt for research.

TEACHING STAFF

Name
Designation
Qualification
Experience

Dr. M. R. Chanadrakar
Assistant Professor
M.Sc., Ph.D., SET
20 Yrs

Name
Designation
Qualification
Experience

Dr. A. D. Theng
Assistant Professor
M.Sc., Ph.D., NET
10 Yrs

Name
Designation
Qualification
Experience

Mr. V. P. Khandwekar
Assistant Professor
M.Sc., NET
10 Yrs

Name
Designation
Qualification
Experience

Dr. V. J. Sharma
Assistant Professor
M.Sc., Ph.D
08 Yrs

Name
Designation
Qualification
Experience

Dr. S. P. Biswas
Assistant Professor
M.Sc. NET, Ph.D.
06 Yrs

Name
Designation
Qualification
Experience

Ms. R. K. Lonkar
Assistant Professor on contractual basis
M.Sc.
03 Yrs

Name
Designation
Qualification
Experience

Ms. T. R. Bhute
Assistant Professor on contractual basis
M.Sc.
03 Yrs

PHOTO GALLERY



"If you want to learn past, present and future of human race.....learn Zoology !!!"

ABOUT THE DEPARTMENT

Department of Microbiology started in 1980 and now recognized as centre of excellence in Microbiology with respect to teaching and learning. The department runs B. Sc. Course with Microbiology as one of the subject at undergraduate level. Additional non grant U. G. course was introduced in 2006 with Biotechnology, Microbiology and Chemistry. M. Sc. Microbiology started in 2007 (CBCS pattern). Career Oriented Programme, Clinical Laboratory Technology (on Self Finance basis) started from 2016 with intake capacity of 40 students.

Department received the Best Department award given by Microbiologists Society, India (MSI). Dr Khandare received the award at the hands of Hon'ble Vice Chancellor of RTM Nagpur university, Dr. Kane on 29 Sept 2019.

GLIMPSES OF THE DEPARTMENT

- Well equipped laboratory
- Highly qualified staff
- Self sufficient departmental library with several books
- Consistent improvement in the result of the department.
- The department provides the consultancy services for microbial analysis of water, soil and biofertilizers.
- The alumni of the department occupy the higher positions at NCCS, Pune, Institute of Microbial Technology, Chandigarh and some are working with NEERI, Institute of clinical research, Nagpur and National research centre for Citrus, Nagpur.

MAJOR INSTRUMENTS

PCR thermal cycler, Gel Documentation System, U.V. Visible spectrophotometer, Fermentor, Trinocular Microscope, Bio safety cabinet, BOD incubator, Rotary incubator shaker.



SYLLABUS HIGHLIGHTS

Undergraduate Programme

Major topics to be covered under UG programme is as follows:

- Microbial physiology
- Medical Microbiology
- Molecular biology
- Techniques in Advance Microbiology
- Industrial Microbiology
- Environmental Microbiology
- Genetic Engineering

On completion of the B.Sc. Microbiology Programme the students will

- Get the knowledge of bacteriological analysis of drinking water, Biofertilizer production, Microbiological analysis of Milk, Industrial production of Antibiotics, Organic solvents, Single cell proteins, Vitamins.
- Have sound skills in various techniques like gel electrophoresis, Chromatography, Immunoelectrophoresis, PCR.
- Develop themselves as a entrepreneur

Postgraduate Programme

Major topics covered under this programme is as follows :

Bioenergetics, Biomarker genes, Designs and applications of GC, HPTLC. Nanotechnology, DNA sequencing, Drug designing and delivery system, Bioinformatics, Medical Microbiology, Immunotechniques, Recombinant DNA technology, Animal Tissue culture.

On completion of the M.Sc Microbiology Programme the students will

- Get the knowledge of DNA Cloning, Transformation, Restriction digestion, animal tissue culture, plant tissue culture, PCR, Fermentation kinetics, Industrial production of Antibiotics, Single cell proteins.
- Have sound skills in Identification of Bacteria and various techniques like gel electrophoresis, Ion exchange chromatography, Immunoelectrophoresis, PCR, SDS PAGE.

TEACHING STAFF

Name

Designation

Qualification

Experience

Dr. Mrs. S. S. Khandare
Associate Professor & Head
M.Sc., Ph.D.
34 Yrs

Name

Designation

Qualification

Experience

Dr. U. A. Bidwai
Assistant Professor
M.Sc., Ph.D.
19 Yrs

Name

Designation

Qualification

Experience

Mr. M. G. Ingale
Assistant Professor
M.Sc., NET
08 Yrs

Name

Designation

Qualification

Experience

Dr. B.V. Mohite
Associate Professor
M.Sc., M.Phil, Ph.D.
13 Yrs

Name

Designation

Qualification

Experience

Ms. Kunica Rai
Assistant Professor on contractual basis
M.Sc., Microbiology
01 Yrs

PHOTO GALLERY



ABOUT THE DEPARTMENT

The department of Physics was established in 1962 under the guidance of Dr. D.S. Supe which is now one of the best well-equipped centre for undergraduate studies in this part of India. Department aims to enable students to enjoy the subject and to stimulate an interest in the social and economic implications of Physics in society. It has three separate laboratories including a dark room containing more than 100 experimental set up. Every year it caters around 300 UG students for in-depth understanding of the subject.

GLIMPSES OF THE DEPARTMENT

- Well-equipped spacious laboratories with more than 100 experimental set ups, computer and internet facility, separate departmental library
- Involvement in the organization of state level and national level event (Scintillation and Innervate)
- Online Digital Teaching Methodology used, includes, online video classes using digital platforms, YouTube video lectures by faculty members of Department, e-contents, Google classrooms, Moodle, etc.
- Certificate course on Nanoscience and Nanotechnology (Nanosense)
- Recognized center for National Graduate Physics Examination (NGPE).
- Guidance for active participation in various intercollegiate competitions viz. quiz, seminars etc.
- Linkage for student Internship programme in national recognized research institute/departments
- Night sky watching (Astro club activity)

MAJOR INSTRUMENTS

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-Perrot Interferometer, B-H loop tracer, LCR Meter.



HIGHLIGHTS OF THE SYLLABUS

Syllabus contains the core branches including mechanics, oscillations and waves, thermodynamics, electro statics, electricity and magnetism, electrodynamics, optics, atomic and molecular physics, statistical mechanics, solid state physics, quantum mechanics, electronics and solid state devices, nano physics, astrophysics, relativity, nuclear physics. 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.

The course design will ensure that graduating students with Physics as one of the subject will have the academic standard pre-requisites to take post-graduate programme in Physics as well as in many allied fields in India and abroad. The multi disciplinary skills they will acquire will be of tremendous value to them especially if they choose to enter such cutting edge research areas; be it in Academia or in Industry. We believe that the graduates with physics will be a complete package to face any national competitive exams held for the graduates.

TEACHING STAFF

Name
Designation
Qualification
Experience

Dr. S.H. Bagade
Associate Professor & Head
M.Sc., Ph.D., SET.
21 Yrs

Name
Designation
Qualification
Experience

Prof. R.G. Jadhao
Associate Professor
M.Sc.
36 Yrs

Name
Designation
Qualification
Experience

Dr. G.V. Lakhotiya
Assistant Professor
M.Sc., SET, GATE,
Ph.D.
09 Yrs

Name
Designation
Qualification
Experience

Dr. S. R. Tiple
Assistant Professor
M.Sc., Ph.D.
09 Yr

Name
Designation
Qualification
Experience

Dr. M. M. Yerpude
Assistant Professor
M.Sc., NET,
Ph.D.
04 Yr

PHOTO GALLERY



"Physics is Everywhere"

ABOUT THE DEPARTMENT

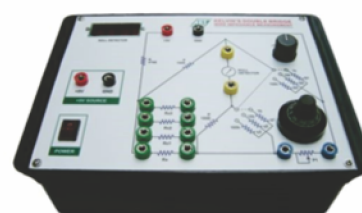
Electronics today stands at the forefront of the rapidly expanding horizon of Science and Technology. Growth in the eld of electronics has been so phenomenal in the recent years that it has entirely changed the life style of people. The ease, the precision, the sophistication and the exhibility provided by electronics in all walks of life and industrial systems has made it a very important subject of study. It is indeed considered as a catalyst of scientific and technological progress. Electronics has, therefore, become a core subject in the curricula of all disciplines. Bajaj College of Science, Wardha started three year B.Sc. (Electronics) programme in 1985.

GLIMPSES OF THE DEPARTMENT

- Well-equipped electronics laboratory
- Computer laboratory for languages and simulations
- Consistent good results
- Seminars and projects for the students
- ICT based teaching aids
- Qualified staff

MAJOR INSTRUMENTS

Temperature Dependent Two Probe Resistivity Measurement Set Up, NI ELVIS, Spartan 3 FPGA Based Development Board, Digital storage Oscilloscope, Kelvin Double Bridge, AM Transmitter



SYLLABUS HIGHLIGHTS

Syllabus includes the following core topics of electronics:

- Electronic Components, Network Theorems & Semiconductor devices
- Fundamentals of Digital Electronics
- Semiconductor Devices
- Advanced Digital Electronics
- OP AMP And Power Supply
- Electronic Circuit Design
- Analogue And Digital Techniques
- Electronic Instrumentation
- Electronic Communication
- Fundamentals of Microprocessor
- Programming in "C"
- Microcontroller 8051

On completion of the B.Sc. (Electronics) Programme, the student will:

- Directly employed or start his/her own work as Electronic circuit designer, Electronics consultant, Testing professional, and even an entrepreneur in electronic industry
- Compete for seats for advanced degree courses like M.Sc. (Electronics).
- Have sound knowledge of the theory behind core subjects like, Electronic components, Electronic measuring and testing instruments, Analog and Digital IC's, Electronic circuit design and implementation, Troubleshooting and maintenance of electronic and electrical devices.
- Have sound skills in assembly Language and High Level Language programming, interfacing of electronic devices with computers, etc.
- Be in a position to develop industrial and entrepreneur applications.

TEACHING STAFF

Name	Dr. V.V. Shinde	Name	Dr. V.M. Ghodki	Name	Dr. P.A. Saudagar
Designation	Associate Prof. & Head	Designation	Associate Professor	Designation	Assistant Professor
Qualification	M.Sc., PGDPS, Ph.D.	Qualification	M.Sc., PGDPS, Ph.D.	Qualification	M. Sc., PGDPS, M.C.A.,
Experience	35 Yrs	Experience	33 Yrs	Experience	NET, Ph. D 08 Yrs

PHOTO GALLERY



"Technology is teaching us to be human again"

ABOUT THE DEPARTMENT

The Mathematics department was established in the year 1962, offering Mathematics at UG (B.Sc.) level. The department has an intake of 120 students. Students are imparted Mathematical education founded on value based academic principles where in all involved contribute effectively, efficiently and responsibly. The faculties take keen interest and efforts for the overall development of students through academic and co-curricular activities.

GLIMPSES OF THE DEPARTMENT

- Qualified and experienced faculty
- Sincere efforts for mathematical and overall development of students.
- Interactive teaching learning
- Efforts to develop conceptual understanding, problem solving skills and applications
- Guidance for co-curricular activities and competitive exams

SYLLABUS HIGHLIGHTS

Mathematics is the core of every academic discipline and essential to the development of science and technology. The present syllabus has been designed as per the UGC model curriculum. A few changes to the extent of 20% according to the guidelines of UGC are intended which mostly include the application of mathematics as per the present need of industry and employability. Some topics in applied mathematics such as Numerical analysis, Graph theory, LPP have been added. The present syllabus would also support other subjects, especially Physics at the undergraduate level. The curriculum aims to improve conceptual understanding, problem solving skills and relating Mathematics to applications.

TEACHING STAFF

Name
Designation
Qualification
Experience

Dr. S. S. Zade

Associate Professor and Head
M.Sc., M.Phil., D.C.S. & A., Ph.D.
31 Yrs

Name
Designation
Qualification
Experience

Mr. R. T. Katre

Assistant Professor
M.Sc., B.Ed., SET
18 Yrs

Name
Designation
Qualification
Experience

Mr. R. S. Pradhan

Assistant Professor
M.Sc., SET
02 Yrs

Name
Designation
Qualification
Experience

Miss. Shweta P. Dahankar

Assistant Professor
M.Sc.
01 Yrs

PHOTO GALLERY



"Math is the problem, thinking is the solution"



BIOTECHNOLOGY DEPARTMENT

ABOUT THE DEPARTMENT

The Department of Biotechnology was established in the year 2006 to run undergraduate course. Our current intake capacity is sixty students for undergraduate course. We offer Biotechnology subject with Chemistry and any one option from Microbiology/Botany/Zoology. The department also runs Post graduation courses during 2010-2014. The department has highly qualified, experienced and dedicated faculty with specialization in Molecular Biology, Plant Tissue Culture, Agricultural Environmental Microbiology, Immunology and Bioinformatics. The aim of department is to foster knowledge in students pertaining to basic and advance in biotechnology field.

Bajaj College of Science, Wardha has been granted autonomous status from the academic year 2017-18. The curriculum under autonomy has been modified 20% by highly experienced subject experts in consultation with academicians, research scientists and industry personnel to meet the latest requirements of biotechnology industries. The faculty and the students of the department are involved in various co curricular and extracurricular activities. It is also inculcating entrepreneurial skills in biotechnology graduates who would fulfill the role of job providers rather than jobseekers.

The department has well furnished laboratories with all equipments to impart more hands on training to the students and to carry out their projects. It has both college central library and departmental library where reputed International and National editions of books are made available to the students and faculties.

Alumni of the department occupy good positions in various industries like Meril Diagnostic Pvt.Ltd., Glenmark Pharmaceutical Ltd., Wipro Ltd, TCS, Eclerx services; Capgemini India Pvt Ltd. Graduating students normally find good fellowships in higher education and pursue their career in reputed institutes like NISER, Bhubaneswar and IIT-Roorkee.

SYLLABUS HIGHLIGHT

Syllabus included some important topics like historical overview of Biotechnology and Environment, Health and Agricultural Biotechnology, Nano Biotechnology, Bioinformatics, etc. Along with the theory, skill oriented experiment including some innovated projects will prepare the student to orient themselves to bridge the gap between science and technology. The present syllabus has been designed in such a way that it not only includes new topics but also involves appropriate chronological sequence of paper per semester, which helps students and teachers to establish a proper link between teaching and learning.

TEACHING STAFF

Name	Dr. Ulka A. Malode-Bidwai
Designation	Co-coordinator Department of
Qualification	Biotechnology and Assistant Professor
Experience	M.Sc. Ph.D. 19 Yrs

Name	Dr. Kunal Kale
Designation	Assistant Professor
Qualification	M.Sc. Ph.D.
Experience	04 Yrs

Name	Miss. Komal S. Dhumane
Designation	Assistant Professor
Qualification	M.Sc.
Experience	02 Yrs

Name	Miss Kranti H. Bamnote
Designation	Assistant Professor
Qualification	M.Sc., SET
Experience	01 Yrs

MAJOR INSTRUMENTS

Incubator, Gel electrophoresis, Micro centrifuge, Cooling centrifuge, Orbital shaking incubator, Autoclave 35 Lit, Cap., Microwave oven, Vertical Laminar air flow, Microscope Olympus.

PHOTO GALLERY



"Once we begin to understand the world, it becomes technology"

ABOUT THE DEPARTMENT

The Department of Computer Science is one amongst the nine academic departments of the Bajaj College of Science, Wardha. The Department came into existence in 1988 and is affiliated to Rashtrasant Tukadoji Maharaj Nagpur University. Global Excellence, teaching and technology development is the vision of the Department. Since 1988, it has been committed to the best IT education and has been continuously scaling new heights in the field of Information Technology. It is providing quality education to students.

GLIMPSES OF THE DEPARTMENT

- Well-equipped laboratory
- ICT Center and Language Laboratory
- Departmental e-Library
- Live Projects, Seminars by the students
- Laboratory with computers of highest configuration
- Internet Broadband Facility with 100 Mbps Speed
- Computer Awareness Course to impart basic computer skills for all the UG students of the college.
- Skill enhancement courses for the students apart from their regular syllabi through Spoken Tutorial Programme of IIT Bombay.

HIGHLIGHTS OF THE UNDERGRADUATE PROGRAMME

On completion of the B.Sc. Computer Science Programme, the students:

- Will have sound knowledge of the Programming languages such as C, C++, Java, VB and SQL. Also they will have knowledge about Information technology, Operating System, System Analysis and Design and Development.
- Can participate in campus internships, independent study projects, part-time computer employment, lectures by guest speakers, Society of Computing Students programming and on-campus employment as lab assistants, lab supervisors and Helpdesk assistants.
- Can develop industrial and entrepreneur applications.

Major Subjects To Be Covered Under This Programme

• Programming In 'C' • Fundamentals of Information Technology • Object Oriented Programming Using 'C++' • System Analysis and Design • Data Structures • Operating Systems • Java Programming • Linux Operating System • Visual Basic Programming • Data Base Management System • Compiler Construction • SQL and PL/SQL

TEACHING STAFF**Name****Designation****Qualification****Experience****Dr. P.A. Saudagar**

Co-ordinator

M. Sc., PGDCA, M.C.A.,

NET, Ph.D.

09 Yrs

Name**Designation****Qualification****Experience****Mr. S. A. Durge**

Assistant Professor

(Contract Basis)

M.Sc. (CS), NET, SET, MCA.

09 Yrs

Name**Designation****Qualification****Experience****Mr. M. M. Wasu**

Assistant Professor

(Contract Basis)

M.Sc., MCA, SET

08 Yrs

PHOTO GALLERY

“The Computer was born to solve problems that did not exist before”

ABOUT LIBRARY

Newly constructed Library the college is committed to fulfill its mission by acquiring the requisite information and documents to cater the needs of its borrowers to help them in achieving excellence in teaching and learning.

Library is fully computerized using customized software 'LIBMAN'. All transactions are carried out in automated environment. All the books are provided with barcode so as to avoid mistakes in manual feeding. Barcode scanner is available in the library for scanning. Our software is installed in IBM Server and all machines are in LAN. Terminals are provided in reading room for access of OPAC and Internet.

The library is housed in 1102.624 Sq.mt. area where in there is a separate Reading Room, Reference Section, Issue Counter, Stack Rooms and Bound Volume Room. The capacity of the reading room is to accommodate 150 readers. Separate arrangement is done for faculties to study in the library.

FACILITIES

- Reading Room Facility
- Reprography Facility
- Orientation to Users
- Internet Facility
- Display of New Arrivals
- WEB OPAC
- INFLIBNET Facility
- Books on Deposit Basis

HEALTHY PRACTICES

- Working in an automated environment
- Reprography
- Display of new arrivals
- Orientation to users
- Suggestion box
- Online Public Access Catalogue (OPAC)
- Free Internet access
- Issue of books on deposit basis during exam period
- CCTV Cameras surveillances in library

STATISTICAL DATA OF LIBRARY AS ON 26-06-2020

TOTAL NUMBER OF BOOKS	43313
Text	27595
Reference	2326
Other	13392
TOTAL NUMBER OF BOUND VOLUMES	1704

VOLUMES

TOTAL NUMBER OF JOURNALS	36
TOTAL NUMBER OF PERIODICALS	19
TOTAL NUMBER OF NEWS PAPERS	13
TOTAL NUMBER OF MULTIMEDIA COLLECTION	371

Some of our pride collection includes

- Encyclopedia Britannica
- Cambridge Natural History
- Scientific American Resource Library
- Encyclopaedias
- Bharatiya Sanskriti Kosh
- MarathiVishwakosh
- Tropica
- Botanica
- Rich collection of Floras

Name**Designation****Qualification****Experience**

Mr. Praful B. Bhojar
Librarian
M.L.I. Sc., SET, M.Phil
08 yrs.

For our collection visit :

http://jbsw.shikshamandal.org/wp-content/uploads/2018/06/library_Catalogue.pdf

Library Website: <https://sites.google.com/site/damlelibrary/>

Web OPAC link:

<https://libcloud.mastersofterp.in/OPACNEW?Library=Bajaj%20College%20of%20Science>



“Nothing is charming than exploring a library”

DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS

SPORTS FOR MEN

1	Swimming	9	Base Ball	17	Archery
2	Basket Ball	10	Chess	18	Badminton
3	Hand Ball	11	Foot Ball	19	Cricket
4	Boxing	12	Ball Badminton	20	Hockey
5	Kho-Kho	13	Soft Ball	21	Taikwando
6	Kabaddi	14	Base Ball	22	Lawn Tennis
7	Volley Ball	15	Table Tennis	23	Sepak Takraw
8	Athletics	16	Net Ball		

SPORTS FOR WOMEN

1	Swimming	9	Base Ball	17	Archery
2	Basket Ball	10	Chess	18	Badminton
3	Hand Ball	11	Foot Ball	19	Cricket
4	Boxing	12	Ball Badminton	20	Hockey
5	Kho-Kho	13	Soft Ball	21	Taikwando
6	Kabaddi	14	Base Ball	22	Lawn Tennis
7	Volley Ball	15	Table Tennis	23	Sepak Takraw
8	Athletics	16	Net Ball		

PHOTO GALLERY

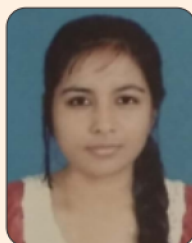




SANKET INGOLE
National Ball Badminton
Champion, Imphal (Manipur)
University Ball Badminton
Champion, Kuppam (A.P.)



JAGDISH KADU
University Ball Badminton
Champion, Kuppam (A.P.)



KU. JUHI RAUT
University Ball Badminton
Champion, Vishakhapatnam
(A.P.)



KU. MANJIRI DHANUSKAR
University Ball Badminton
Champion, Vishakhapatnam
(A.P.)



KU. SAMIKSHA GHODE
University Hockey Champion,
Gwalior



RAJ KHARDE
University Handball Champion,
Gwalior & Gold Medal in
All India
University Handball Champ.



KU. AARZOO PATEL
University Handball
Champion, Gwalior



KU. MANISHA SAHU
University Handball
Champion, Gwalior



KU. NIKITA ALURI
University Baseball
Champion, Baramati



ADARSH BANGADE
University Softball Champion,
Kudapa Vemana



CHETAN BOTKULE
University Softball Champion,
Kudapa Vemana



SUSHANT MENDHE
University Softball Champion,
Kudapa Vemana



KU. JHAVERIYA QURESHI
University Sepak Takraw
Champion, Bareilly



KU. MAYURI KAPSE
University Sepak Takraw
Champion, Bareilly



VIJAYSINGH TOMAR
University Sepak Takraw
Champion, Bareilly



KU. KALYANI BADHIYE
University Netball
Champion, Annamalai



RAHUL BAISWARE
University Netball
Champion, Calicut

EXTRA-CURRICULAR ACTIVITIES

Cultural Events

Every year cultural programmes are organized by college as **College Day Celebration**. Students are encouraged to participate in various activities like Dance, Drama, Singing, Plays, etc including various competitions such as Debate, elocution, quiz, etc. Artistic students are promoted for the participation in **Youth Festival** organized by RTMNU, Nagpur.

NSS

National Service Scheme (NSS) has been in operation in our college since 1965. Since then it has been involved in various social service activities including blood donation, plantation drive, gender empowerment, national integration & social harmony, disaster management, environment protection and awareness, engaging with new frontiers of knowledge, social defense, health and well-being, legal literacy, awareness building about India's national heritage, culture and traditions, road safety campaigns, etc. NSS functions as a learning and resource centre for the benefit of the youth.

CWSS

Centre for Womens Studies and Services established in the college in 2001-02. This centre stress to increase the analysing capacity, research ability and leadership qualities among the students. Various programmes are conducted as per the directives of UGC, Government of Maharashtra and RTM Nagpur University, Nagpur. CWSS facilitates students to learn various social problems like, water pollution and harvesting, dowry system, organic farming, child labor, woman literacy, equality and laws for women, health and family welfare. CWSS activity helps the students to study these issues which help to develop their overall personality. The students get the incentive marks and the marks are counted for division and merit.

PEC

Population Education is an integral part of Adult Education and Extension activity. It is important because it changes the way of living and use of natural resources. It learns to realize the responsibility regarding the population, situation of small family and the communities. It is also needed to control the population growth and to improve the better quality of life. Objectives: (1) To create awareness about the population explosion problems related to population. (2) To create awareness for small family (3) To create health awareness (4) Social and personality development.

NCC

National Cadet Corps Girls as well as Boys battalion is integrated in our college. Active participation of students in various events at the State as well as National level.



CO-CURRICULAR ACTIVITIES

Seminars & Conferences

In order to promote awareness and understanding of emerging trends in science, our college organizes **INNERVATE Series** (National Seminars & Conferences) on various topics as innovations in basic sciences in the realm of modern educational system, Life science technologies: an Emerging Frontier, Stepping up with bio scientific technologies, Nano technology.

Students Seminar Competition

Scintillation is the state level Seminar Competition organized by Bajaj College of Science, Wardha every alternate year. The aim of this competition is to provide an academic platform to the B. Sc. students for expressing their views on a science topic of their own interest.

Skill Enhancement Programme

To improve the skills of the students, hands on training is provided on sophisticated instruments like FTIR, PCR, XRD, etc., either by engaging parallel sessions or by conducting Workshops on topics like Micro scale techniques, Synthesis of Nonmaterials.

Inter-Collegiate Competitions

Students of the college are encouraged to participate in various inter-collegiate competitions. Our college has a tradition of bagging prizes every year at various seminar, quiz, project competitions. Our students have also excelled in various talents search examinations and aptitude tests.

Students Internship Programme

Meritorious B.Sc. students have received prestigious INSA summer interns in the summer season of 2019. These INSA recipients of BCS had received research training in some of prestigious National Institutions such as National Centre for Cell Science (NCCS), Pune, Central Drug Research Institute (CDRI), Lucknow and Indian Institute of Astrophysics (IIA), Bangalore. Apart from these internship placements, other meritorious B.Sc. and M.Sc. students have received summer training in other Institute from Pune. BCS teaching staff enthusiastically support and help B.Sc. and M.Sc. students for various internship programmes.



STUDENT'S ACHIEVEMENTS

University Rank Holders



Joint Admission Test for M.Sc. (IIT-JAM) - 2021



Mr. Rahul Baisare



Ms. Pranjal Nandeshwar



Mr. Kartik Gokhe



Miss Trupti Murkute



Miss Annam Sayyad

Glimpses of Autonomy

Indian National Science Academy (INSA) Summer Intern Fellows - 2019

Opportunities Encashed

Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration (From-To)	Participant
Summer Internship program for UG students	Centre for Materials for Electronics Technology C-MET Pune: Ministry of Electronics & Information Technology (MeitY), Govt. of India	02/05/2019 to 05/07/2019	Ms. Urvi Gupta
	National source of microbial resource (NCMR), Pune	20/05/2019 to 28/06/2019	Ms. Kalyani Badhiye
	National Institute of Technology, Rourkela, Odisha	May 2019 to July 2019 (3 Months)	Ayushi D Chaudhari
	National Institute of Technology, Rourkela, Odisha	May 2019 to July 2019 (3 Months)	Aaditya Vilas Bhaskarwar
	Department of Instrumentation Science, Savitribai Pune University, Pune	6/5/2019 to 17/6/2019	Mr A C Nagrale
Summer Research Fellowship Programme	Sponsored by IASC (Banglore) and INSA (New Delhi) and NASI (Allahabad)	2/5/2019 to 2/7/2019	Mr Kartik G Gokhe
	National centre for cell sciences (NCCS), Pune	10/5/2019 to 12/07/2019	Ms. Trupti Murkute
	Wadia College, Pune	22/5/2019 to 23/6/2019	Ms. Naincy Jalan

INFRASTRUCTURE AND FACILITIES

The college is spread over 37.55 acre area. It has well ventilated sufficient number of spacious classrooms. These classrooms are well acquainted with conventional as well as advanced teaching aids. All science departments have separate sections and laboratories for general as well as research programmes. The college has got a separate multipurpose hall (Gandhi Memorial Hall) and a separate seminar hall. Newly constructed Dr. Damle library with a massive diverse collection of books adds to the strength of the college. Special research facilities include Central Instrumentation laboratory which has high-end research equipment like X-ray diffraction, FTIR, UV-vis., Gel doc, PCR etc. Other teaching-learning facilities include Language Laboratory cum ICT center with net connectivity for students. College also has a separate Girl's common room. Girls' hostel and faculty quarters are located in the campus itself.

College has a separate health center, gymnasium, botanical garden, canteen and different playgrounds for different sports. Open area activity center Kalaniketan adds to the rich cultural heritage of the college. Recently college has got a newly constructed separate life science wing and smart classrooms.

Explore our campus via google earth: <https://goo.gl/XtYLby>



Access to library Stacks



College Canteen



Wi-Fi Facility



High Speed Internet
in ICT Center



Reprography Facility



Health Club



CCTV Surveillance



Sanitary Napkin Vending Machine & Incinerator

Why to get into Bajaj College of Science ?



BAJAJ COLLEGE OF SCIENCE

Jamnallal Bajaj Marg, Civil Line, Wardha - 442001 (M.S.) / Ph/Fax : 07152-230515

E-mail : jbsciencewardha@yahoo.co.in / Website : jbsw.shikshamandal.org