

DEPARTMENT PROFILE

DEPARTMENT OF PHYSICS **BARKATULLAH UNIVERSITY, BHOPAL**

1. ABOUT THE DEPARTMENT:

The Department of Physics was established in the Barkatullah University in the year 1984. Right from its inception, the department has made rapid strides in achieving academic excellence and is at present a premier institute for research and teaching in Physics and Materials Science. In the past decades, it has been widely observed that students have developed apathy towards opting the science subject in comparison to engineering and medical disciplines. The professional courses are much prominent as compared to basic sciences. This fact is also accepted globally. However, if we look back and assess the dignity of basic sciences, then we find that today's progress in the field of science and technology is only due to the systematic research in the area of basic sciences. With these views, it is undoubtedly accepted fact that without the growth of basic sciences, especially the Physics discipline, the technology cannot grow further. Therefore, it is mandatory to develop a department with excellence for the study of course in Physics at the university level, where the excellence in academics can be thought of and maintained. In order to cater more viability of basic sciences in universities, which are prime centers for mass education in the country, the Department of Physics was established in the Barkatullah University. Right from its inception, the department has made rapid strides in achieving academic excellence and is at present a premier institute for research and teaching in Physics and Materials Science.



Prof. Sadhna Singh



Prof. N.K. Gaur



Dr. Madhu Sarwan

Mission of the Department

- To introduce innovative methods of teaching for higher Education through smart systems, audio, video aids etc.
- To provide platform for scientific interactions through organizing international/ national conferences seminars, symposia and National and International collaborative research projects.
- To impart hands on technical training to faculty, researchers and students of affiliated colleges and other institutions of the central region.

Vision of the Department

The centre of Excellence will be developed to reconcile the requirement of manpower training and advanced research facilities. The essential mandate for the centre will be to provide research opportunities to the weaker sections like socially backward tribes, economically backward classes. The emphasis will be on providing experimental and theoretical state-of-art facilities under one roof for Materials Science Research. The centre will act as catalyst to enhance university-industry interaction by providing consultancy and skilled manpower for societal needs. The academic institutions, colleges, industries of central India will be the major beneficiaries.

2. COURSES OFFERED:

The academic programs of the department have been designed to cater the scientific and technological manpower requirements at the national and international arena. Presently, the department is running post-graduate courses mainly

S.No.	Name of Course	No. of seats	Eligibility	Specialization/Syllabus	Year (Since)
1.	Ph. D. (Physics)	16	M.Sc.	Physics (All Allied Subjects)	1984
2.	M. Sc. (Physics)	35	B.Sc.	Physics	1984

3.	B. Sc. (Hons). Physics	30	12th	PCM	2024
4.	B. Sc. (Aviation)	30	12th	PCM	2024

3. FACULTY :

The department has a small team of dynamic and dedicated faculty. We also invite eminent scientists and academicians from other reputed organizations as Guest Faculty to supplement the academic programs. Industries and R & D units are also approached to establish close ties with the department through MoU, collaborations and Human Resource Development Programs.

S.No	Name of Faculty Member	Designation	Email ID	Phone No.	Field of Specialization
1.	Prof. Sadhna Singh	Professor	Drsadhna100@gmail.com	9425030113	Condensed Matter Physics
2.	Prof. N. K. Gaur	Professor	srl_nkgaur@yahoo.co.in	9425029161	Condensed Matter Physics
3.	Dr. Madhu Sarwan	Assistant Professor	madhusarwan@gmail.com	9424973315	Condensed Matter Physics

4. STAFF

S.No	Name of Staff Member	Designation	Email ID	Phone No.

1.	Bharati Devendra	Programmer	bhartidevendra@gmail.com	9826824447
2.	Mohammad Wasi	Assistant Grade III	Mohammedwasi8308@gmail.com	9993369183
3.	Hemlata Sain	Peon		9098092205
4.	Dheeraj Singh Mehar	Peon (स्थायी कर्मी)		7869591628

Other Faculty Members:

S. No.	Name	Designation	E mail ID	Field of Specialization
1.	Dr. Janvi Sharma	Guest Faculty	Sharma04j@gmail.com	Material Science
2.	Dr. Veena Thakur	Guest Faculty	Veenathakur007@gmail.com	Material Science

5. LIST OF INSTRUMENTS:

1. Vacuum Oven (400°C)Mfg. : Metrex Scientific Instrumentations (p) Ltd
2. Hydrollic Pressure Machine.
3. Microprocessor controlled furnace (1200°C)Mfg. :Metrex
4. Horizontal Rocking furnace(with gas perging and pressure setup 1350°C)
5. QuartzampoulesealingMfg. : ANTS
6. Microprocessor Controlled Furnace (1200°C)Mfg. :Metrex
7. HOT PLATE (300 °C) and Centrifuge

8. Spin coater with Vacuum Pump
9. 1 MLH Magnetic Stirrer(With Temperature Variation)Mfg. : REMI
10. Ultrasonicator
11. Hydraulic Press
12. Planetary Ball Mill
13. Electromagnet Model: - HEM-250Mfg. :Polytronic (PC)
14. Four Probe Resistivity Setup and Dielectric
15. Weighing Machine

6. DEPARTMENTAL SEMINARS/ACTIVITIES:

- Various departmental activities like sport, various competitions and celebrations are organized on regular basis.
- An innovative recreation is Department ask all the Ph.D Awardees to donate a plant with their names marked on the plant to maintain the greenness of the department. Later on department takes care of the donated plant.
- Students and Research scholars are encouraged to visit institutes of National /international importance. They are guided to present research papers at National/International conferences.
- Subject experts/ Scientists/ Professors from reputed institutes are regularly invited for giving lectures and academic discussions with students/ researchers.
- Plantation and cleanliness drive of the department garden on 2nd October (Gandhi Jayanti) every year.