



**CHHATRAPATI SHAHU JI MAHARAJ UNIVERSITY**  
**KANPUR, UTTAR PRADESH**



**Department of Life Sciences  
and Biotechnology**

**INFORMATION BROCHURE**

**ADMISSIONS  
OPEN  
FOR  
2022-23**

**SPECTRUM  
OF COURSES  
OFFERED**



B.Sc. (Life Sciences)
B.Sc. (Biotechnology)
B.Sc. (Hons.) Biological Sciences
B.Sc. (Biochemistry, Botany, Zoology)
B.Sc. (Agriculture)
B.Sc. (Horticulture)
M.Sc. (Life Sciences)
M.Sc. (Biotechnology)
M.Sc. (Biochemistry)
M.Sc. (Microbiology)
M.Sc. (Food Technology)
M.Sc. (Biomedical Sciences)
M.Sc. (Integrated) (Biotechnology)
M.Sc. (Integrated) (Microbiology)
M.Sc. (Human Molecular Genetics)
M.Sc. Botany (Plant Sciences)
M.Sc. Zoology (Animal Sciences)
M.Sc. (Environmental Science and Technology)
M. Sc. (Pharmaceutical Biotechnology)
M.Sc. (Forensic Science)



## ABOUT US

The Department offers Undergraduate, Post Graduate and a Doctoral degree on full time basis. Industrial Visits, Trainings and Projects are an integral part of the courses offered by Department of Life Sciences and Biotechnology. The course has been designed to acquaint students with an advanced knowledge of areas of Biological Sciences.

The Department of Life Sciences and Biotechnology embraces excellence in modern teaching and facilitates higher education in Life science, Biotechnology, Microbiology and Biochemistry at bachelor's, master's, and doctorate levels with a multi- and interdisciplinary approach. Department has excellent faculties with interdisciplinary global exposures and a vibrant globally leading vision to do excellence in teaching and research in frontiers of Biological Sciences. Biological science is a comprehensive scientific study of living organisms such as animals, humans, plants, and microorganisms like viruses, bacteria and fungi. Under the leadership of our Honourable Vice-Chancellor, the Department of Life Sciences and Biotechnology is committed to providing quality training in different courses related to areas of Biological Sciences (Life Sciences, Biotechnology, Biochemistry, Microbiology, Agricultural Sciences, Food Technology, Environmental Sciences, Forensic Science, Human Molecular Genetics, Plant Sciences and Animal Sciences). The department also intends to use artificial intelligence and machine learning in biological sciences to stimulate biomedical research which has fair scope of developing therapeutic modules of different dreadful diseases and ailments. Department of Life Sciences and Biotechnology offers excellent high-level research opportunities in the following area of Biological Sciences:

- Cancer Biology
- Molecular Biology
- Molecular Microbiology
- Molecular Plant-Microbe Interactions
- Molecular Genetics
- Plant Molecular Biology
- Biochemistry
- Protein Engineering
- Molecular Enzymology
- Structural Biology
- Neurobiology
- Plant Sciences
- Animal Sciences
- Microbial Technology
- Parasitology
- Infection Biology
- Immunology
- Bioremediation

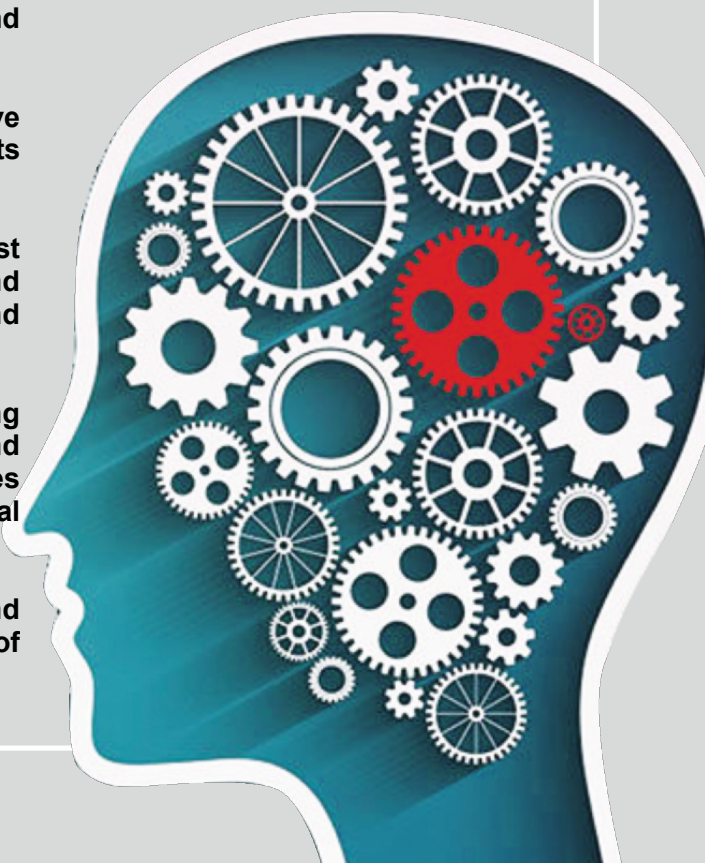


## VISION

The department aspires to create opportunities and a world class infrastructures for students through multi-disciplinary education, research and training in the biological Sciences. Our vision is to become global leader in the field of Biological Sciences and to create excellence in research, promote innovation & encourage entrepreneurial activity and disseminating knowledge by providing inspirational learning to produce professional leaders for serving the society.

## MISSION

- To attain high standards in teaching and research in Biological Sciences, and to become a desired destination for highly motivated students.
- To awaken the young minds and discover their talents both in theoretical and practical Biological Sciences, through dedication to teach, commitment towards students and innovative multimedia instructional methods.
- To provide an accommodative and facilitative environment for faculty members and students to flourish in research and development.
- To provide a platform to keep abreast with latest developments in Biological Sciences and motivate the young minds for startup and entrepreneurship in this area.
- To organize and sustain efficient operating systems in the Department of Life Sciences and Biotechnology for realization of our objectives as Institution of eminence and international standards.
- To make our students future leaders and professionals and entrepreneurs in the field of Biological Sciences.







Department is well equipped with advanced research facility in the fields of Biochemistry, Biotechnology, Microbiology, Molecular Biology and Genetic Engineering, Molecular Plant-Microbe Interactions, Molecular and Cellular Immunology, Applied Microbiology, Cancer Biology, Drug Discovery, etc.



**Department of Life Sciences and Biotechnology**  
**List of Faculty**

S. No.	Name & Designation	Research Area
1.	Dr. Nand Lal ( <i>M. Sc., Ph.D.</i> ) Professor, Director & Head	Plant Molecular Biology & Biotechnology, Stress Physiology/ Biochemistry
2.	Dr. Sudhir Kumar Awasthi ( <i>M. Sc., Ph.D.</i> ) Pro-Vice Chancellor, Professor & Dean	Biochemistry & Immunology
3.	Dr. Varsha Gupta ( <i>M.Sc., Ph.D.</i> ) Professor	Immunology & Rheumatology
4.	Dr. Rolee Sharma ( <i>M.Sc., Ph.D.</i> ) Professor	Immunobiochemistry, Host-Pathogen Interactions, Targeted Drug Delivery
5.	Dr. Rajesh Kumar ( <i>M.Sc., Ph.D.</i> ) Associate Professor	Biochemistry, Molecular Biology & Enzymology
6.	Dr. Shilpa Deshpande Kaistha ( <i>M. Sc., Ph.D.</i> ) Associate Professor	Applied Microbiology
7.	Dr. Rajeev Mishra ( <i>M. Sc., Ph.D.</i> ) Associate Professor	Cancer & Molecular Biology
8.	Dr. Anuradha Kalani ( <i>M. Sc., Ph.D.</i> ) Associate Professor	Neurobiology, Mitochondria & Exosomes Biology
9.	Dr. Pramod K. Yadav ( <i>M. Sc., Ph.D.</i> ) Associate Professor	Molecular Enzymology & Structural Biology
10.	Dr. V. K. Varma Assistant Professor	Parasitology, Hydrobiology & Hematology of Fish
11.	Dr. Alok Pandey ( <i>M. Sc., Ph.D.</i> ) Assistant Professor	Molecular Plant-Microbe Interactions, Molecular Genetics, Molecular Microbiology, Plant Immunity
12.	Dr. Gaurav Kumar ( <i>M. Sc., Ph.D.</i> ) Assistant Professor	Neurobiology & Systems Biology
13.	Dr. Ajay Kumar Pandey ( <i>M. Tech., Ph.D.</i> ) Assistant Professor	Microbial Technology, Biofuels & Industrial Biotechnology
14.	Dr. Soni Gupta ( <i>M. Sc., Ph.D.</i> ) Assistant Professor	Plant Biotechnology, Reverse Genetics, Medicinal & Aromatic Plants
15.	Dr. Akhilendra Pratap Bharati ( <i>M. Sc., Ph.D.</i> ) Assistant Professor	Molecular Biology, Epigenetics & Transcription Regulation
16.	Dr. Ranjana Gautam ( <i>M. Sc., Ph.D.</i> ) Assistant Professor	Genetic Crop Improvement & Plant Microbe Interaction
17.	Dr. V. Sreeharsha Rachapudi ( <i>M. Sc., Ph.D.</i> ) Assistant Professor	Plant Molecular Biology, Renewable Energy & Biofuels
18.	Dr. Chandresh Sharma ( <i>M. Sc., Ph.D.</i> ) Assistant Professor	Translational Biotechnology, Immunotherapy & Immunodiagnostic



**Department of Life Sciences and  
Biotechnology is offering following courses  
in the academic year 2022-2023**

S. No.	Name of Courses	Duration	Eligibility	Seats	Fees (Rupees per year)
1.	B.Sc. (Life Sciences)	3 Years	10+2 degree, (Biology/Mathematics group) with 50% marks in aggregate	60	34,293/-
2.	B.Sc. (Biotechnology)	3 Years	Intermediate (10+2), with any of the combination of subjects amongst biology and mathematics with at least 50% marks in aggregate (5% relaxation for SC/ST)	120	34,093/-
3.	B.Sc. (Hons.) Biological Sciences	4 Years	The Higher Secondary School Certificate (passed with 40%) 11 years (5+3+3) examination conducted by the Board of Secondary and Higher Secondary Education in the Science stream or Vocational stream in the subjects notified by the University from time to time.	60	34,200/-
4.	B.Sc. (Biochemistry, Botany, Zoology)	3 Years	10+2 degree, (Biology/Mathematics group) with 50% marks in aggregate	60	30,000/-
5.	B.Sc. (Agriculture)	4 Years	10+2 degree, (Biology/Mathematics group) with 50% marks in aggregate	60	40,000/-
6.	B.Sc. (Horticulture)	4 Years	10+2 degree, (Biology/Mathematics group) with 50% marks in aggregate	60	40,000/-
7.	M.Sc. (Life Sciences)	2 Years	10+2+3 degree, (B.Sc. /B.Tech /B.Pharma /B.V.Sc./M.B.B.S.) with any of the subject amongst Zoology, Botany, Chemistry, Microbiology, Biochemistry, Environmental Sciences, Biotechnology, Mathematics, Physics, Medical Laboratory Technology, Medical Microbiology, Bioinformatics, Food Technology, Nutrition Science, Computer Science, Hospital Administration, and allied subjects with at least 50% marks in aggregate, (relaxation of 5% for SC/ST/Differently abled students).	40	10,343/-
8.	M.Sc. (Biotechnology)	2 Years	Bachelor's degree, with any of the combination of subjects amongst Zoology, Botany, Chemistry, Microbiology, Biochemistry, Environmental Sciences, Biotechnology, Mathematics and Physics with at least 50% marks in aggregate (5% relaxation for SC/ST).	30	53,643/-
9.	M.Sc. (Biochemistry)	2 Years	Bachelor's degree (B.Sc./ B.Tech./ B.Pharma/ B.V.Sc./M.B.B.S.) with any of the subjects amongst Zoology, Botany, Chemistry,	30	44,200/-

			Microbiology, Biochemistry, Environmental Science, Biotechnology, Mathematics, Physics, Medical Laboratory Technology, Medical Microbiology, Bioinformatics, Food Technology, Nutrition Science, Computer Science, Hospital Administration and allied subjects at Bachelor level with at least 40% marks in aggregate (relaxation as per university rule)		
10.	M.Sc. (Microbiology)	2 Years	Bachelor degree (minimum three year course) in biological sciences with at least 50% marks in aggregate (5% relaxation for SC/ST)	40	54,200/-
11.	M.Sc. (Food Technology)	2 years	B.Sc. (Food Technology), B.Tech. (Food Technology), B.Sc. (Agriculture), B.Sc. (PCM/ZBC) or any Science graduate from a recognized University with at least 50% marks in aggregate (5% relaxation for SC/ST).	40	44,200/-
12.	M.Sc. (Biomedical Sciences)	2 Years	Bachelor's degree (B.Sc./B.Tech. /B. Pharma/B.V.Sc./M.B.B.S.) with any of the subject amongst Zoology, Botany, Chemistry, Microbiology, Biochemistry, Environmental Sciences, Biotechnology, Mathematics, Physics, Medical Laboratory Technology, Medical Microbiology, Bioinformatics, Food Technology, Nutrition Science, Computer Science, Hospital Administration, and allied subjects at Bachelor level with at least 50% marks in aggregate (relaxation of 5% for SC/ST/Differently abled students).	60	60,000/-
13.	M.Sc. (Integrated) (Biotechnology)	5 Years	10+2 degree, (Biology/Mathematics group) with 50% marks in aggregate	60	30,000/- To 50,000/-
14.	M.Sc. (Integrated) (Microbiology)	5 Years	10+2 degree, (Biology/Mathematics group) with 50% marks in aggregate	60	30,000/- To 50,000/-
15.	M.Sc. (Human Molecular Genetics)	2 years	10+2+3 degree, (B.Sc. /B.Tech /B.Pharma /B.V.Sc./M.B.B.S.) with one of the subject as genetics/zoology/botany/biotechnology/biochemistry with 50% marks in aggregate, (relaxation of 5% for SC/ST/Differently abled students).	40	55,000/-
16.	M.Sc. Botany (Plant Sciences)	2 Years	10+2+3 degree (B.Sc. /B.Tech /B.Pharma /B.V.Sc./M.B.B.S.) with one of the subject as Botany/Biotechnology with at least 50% marks in aggregate (relaxation of 5% for SC/ST/Differently abled students).	40	20,000/-
17.	M.Sc. Zoology (Animal Sciences)	2 Years	10+2+3 degree (B.Sc. /B.Tech /B.Pharma /B.V.Sc./M.B.B.S.) with one of the subject as Zoology/Biotechnology with at least 50%	40	20,000/-



			marks in aggregate (relaxation of 5% for SC/ST/Differently abled students).		
<b>17.</b>	M.Sc. (Environmental Science and Technology)	2 Years	Bachelor degree (minimum three year course) in sciences with at least 50% marks in aggregate (5% relaxation for SC/ST)	30	45,000/-
<b>18.</b>	M. Sc. (Pharmaceutical Biotechnology)	2 Years	10+2+3 degree (B.Sc. Biology) with at least 50% marks in aggregate (relaxation of 5% for SC/ST/Differently abled students).	40	1,30,000/-
<b>19.</b>	M.Sc. (Forensic Science)	2 Years	10+2+3 degree (B.Sc. /B.Tech /B.Pharma /B.V.Sc./M.B.B.S.) with one of the subjects as science / Forensic Science/ Medicine / Engineering / Pharmacy with at least 50% for General/OBC (NCL)/EWS category candidates, (relaxation of 5% for SC/ST/Differently abled students).	40	50,000/-

Contact Details	
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