



Welcome

**NAAC Peer Team Members
(19th September, 2024)**

DEPARTMENT OF BIOTECHNOLOGY

SHANTI PRASAD JAIN COLLEGE, SASARAM



Presentation

(19th September, 2024)

BY

SANGITA SINGH

Department of Biotechnology



Sangita Singh
Head
of the Department

The Department of Biotechnology, estd. In the year 2006. Since then, the department has been importing excellent education in all the papers in 3 years degree course.

All the faculties & students practice participatory learning through regular classes. Internal assessments & job Training programs in different organizations/ laboratories such as NMCH Sasaram, Patna, Varanasi, Kolkata etc.



About the Department

The Department of Biotechnology was established under the faculty of science in the year 2006 to provide quality education to ignite the mind of young stakeholders. The department strives to promote all round development of students through various academic and co-curricular activities with the extraordinary support of our 2 guest faculties against 30 student sanctioned seat of 3 year's UG program.



OUR VISION

To be a center of excellence in field of Biotechnology education, research, training and entrepreneurship guided by sound scientific principles, quality, teaching and thrust for improvement. The Department shall devote wholly to achieve excellence in the promotion of Biotechnology. Instill ideas amongst the budding youths in the eras of Biotechnology and nurturing the human resource for national and global needs.



MISSION

Our future economy will be Bioeconomy, and it is our responsibility to drive this transformation while staying true to the overarching mission of Biotechnology, to heal, feed and fuel the world. Applications of different areas of Biotechnology to develop the knowhow for plant, animal and medical sciences. Creation of the skilled Biotechnologist to help the society to cope up with the new challenges. Training the prospective entrepreneurs for the industrial opportunities.



Name of the Department : Bachelor in Biotechnology

Particulars	U.G
Program offered system	Annual System
Course offered	BIOTECHNOLOGY
Course Approved Year	2006
Students Sanctioned Seat	30
Course Duration	03 Years
Current Academic Session	2024-27
Current Admitted Students	25 ⁷



Faculty Strength

Designation	Sanctioned	Filled
Professors	02	Nil
Associate Professors		Nil
Assistant Professor		Nil
Guest Teacher		02

Permanent Teacher - 02

Guest Teacher - 01

Total Full Time Teachers - 03



Permanent Teacher Profiles

Names	Qualification	Designation	Years of Experience	Total No. of Ph.D. Awarded
Sangita Singh	M.Sc.	Assistant Professor	07	
Dr. Vikas Kumar	Ph.D, M.Sc.	Assistant Professor	01	



Guest Teacher Profiles

Name	Qualification	Designation	Years of Experience
Prabhat Kumar	M.C.A.	Assistant Professor	02

- Total No. of Staff - 01
- No. of Technical Staff - 00
- No. of Non-technical Staff - 01



Program Outcomes and Program Specific Outcomes as Per V.K.S.U.

Program Outcomes

PO1: Profound Professional Knowledge: Obtain proficiency to maneuver in diverse

context of the advance subject knowledge.

PO2: Critical Thinking and Analysis: Attain the analytical expertise to create, analyse, formulate, and solve challenging problems.

PO3: Environment and sustainability: Understand the impact of the scientific solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO4: Research and Innovation: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Effective Communication: Demonstrate skills such as effective communication, decision making, problem and adapt ability to create technical writing.

PO6: Problem Solving: Understand, interpret, explain, analyse and assess the tools, techniques, models and methodologies to solve problems.

PO7: Employability and higher Education: Show proficiency in professional, employability and soft skills required for higher education and placements.

PO8: Advance tools and techniques: Attain ability to work with advanced IT tools and techniques in their domain.

PO9: Social Consciousness: Acquire awareness towards gender, environment, sustainability, human values and professional ethics and understand the difference between acting, responding and reacting to various social issues.

PO10: Nation Building: Introspect and evolve into dynamic and creative individuals capable of socially productive, constructive actions that positively impact our Nation and the World at large



Program Outcomes and Program Specific Outcomes as Per V.K.S.U.

Program Specific outcomes

PSO1: Acquire competencies in theoretical as well as experimental Biotechnology in order to enhance knowledge in the applied aspect of the subject related to the welfare/development of society.

PSO2: Apply written and oral communication skills to communicate effectively in healthcare, industry, academia and research.

PSO3: Develop aptitude for research in bio-science at molecular level and its interdisciplinary areas.

PSO4: Compete for employment in academia, agriculture, horticulture and need based industry with the biotechnological skills.

PSO5: Produce entrepreneurs who can develop sustainable solutions in mushroom cultivation and small scale biofertilizer production.

PSO6: Apply responsibilities to promote societal health and safety, upholding the trust given to the profession by the society and develop skills, attitude and values required for self-directed, lifelong learning and professional development. **PSO7:** Acquire awareness towards gender, environment, sustainability, human values, and professional ethics and understand the difference between acting, responding, reacting to various social issues.



Research & Publications During 2017-18 till Date

Sl.No	Name of the Teacher	Title of the Article/Books/Chapter	Publishers	Year
01	Dr. Vikas Kumar	Spectrum of chemo-radiotherapy induced fungal infection in head and neck cancer patients at tertiary care centre of Eastern India.	ORAL ONCOLOGY REPORTS (Cite Score 0.2)	2023
02	Dr. Vikas Kumar	Determination and evaluation of HR-HPV genotype in different communities of Bihar, India.	INTERNATIONAL JOURNAL OF HEALTH SCIENCE (QASSIM)	2022
03	Dr. Vikas Kumar	Protective efficacy of <i>Coriandrum sativum</i> seeds against arsenic induced toxicity in Swiss albino mice.	TOXICOLOGICAL RESEARCH (I.F- 3.1)	2022
04	Dr. Vikas Kumar	Therapeutic effect of fenugreek (<i>Trigonella foenum-graecum</i>) seeds extract against arsenic induced toxicity in Charles Foster rats	JOURNAL OF APPLIED AND NATURAL SCIENCE (CiteScore- 0.8)	2021
05	Dr. Vikas Kumar	Arsenic exposure in Indo Gangetic plains of Bihar causing increased cancer risk.	SCIENTIFIC REPORTS (I.F- 4.9)	2021
06	Dr. Vikas Kumar	Phytoremedial effect of <i>Tinospora cordifolia</i> against arsenic induced toxicity in Charles Foster rats.	BIOMETALS (I.F- 4.1)	2020
07	Dr. Vikas Kumar	Anti-hyperglycemic and antioxidant action of <i>Azadirachta indica</i> leaf in alloxan induced type-I diabetes mellitus in experimental diabetic swiss albino mice: a histopathological investigation.	INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCE AND RESEARCH	2018



Research & Publications Journals/Conferences/Seminars

During 2017-18 till Date

Sl.No	Name of the Teacher	Total No. of Articles/Research Paper	Total No. of Paper in National/International Conference
1	Dr. Vikas Kumar	02 National 05 International	06 International Conference 02 Symposia 02 Workshops



Academic Activities Conduct by the Department

Title of Program/Activities	Date	Details of Recourse Person
Workshop on “ Importance & scope of Biotechnology”	July, 2023	Dr. Alpana Srivastava



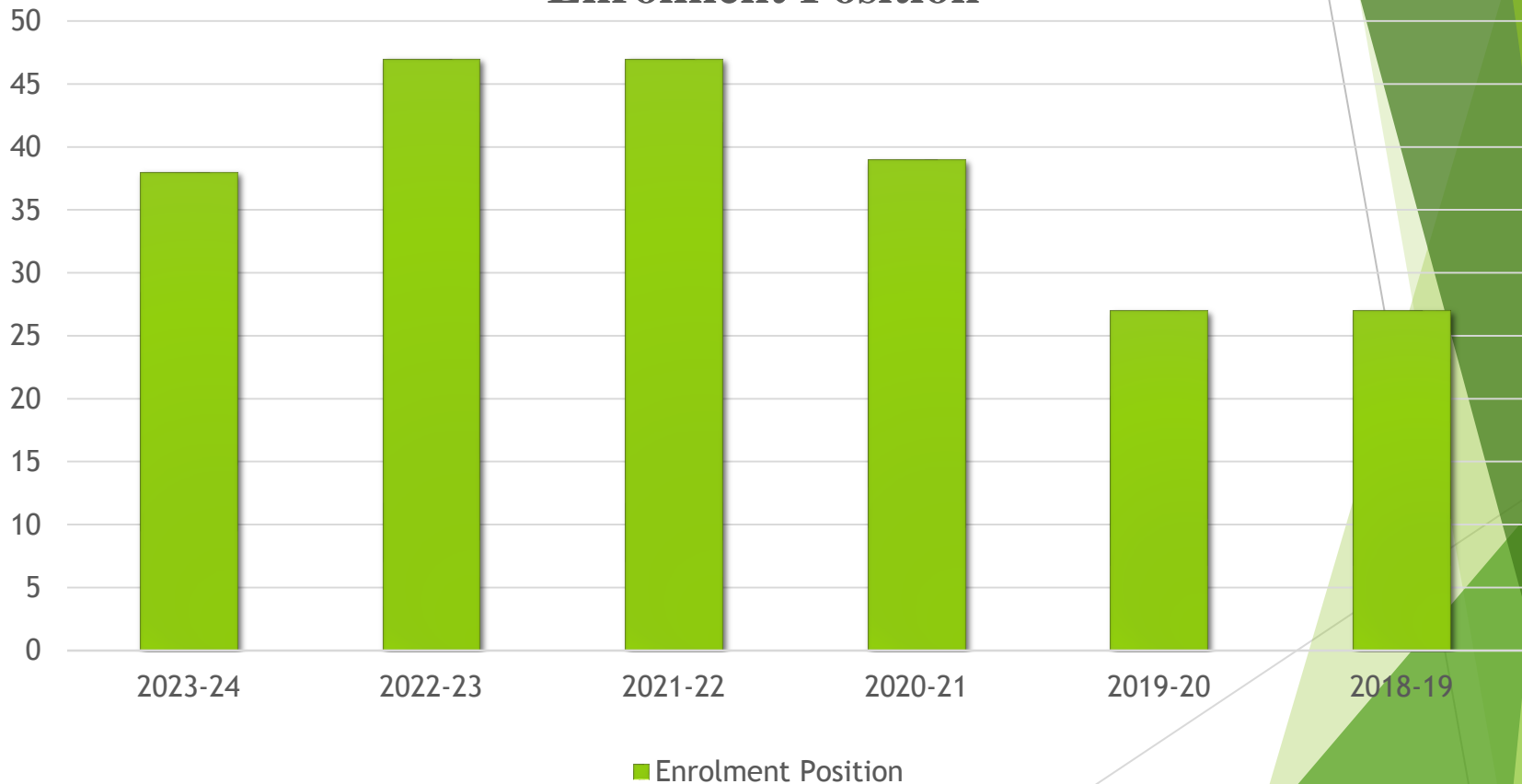
**Enrolment Position in U.G Programme
Session - 2018-19 to 2023-24**

Session / Year	Part -I	Part -II	Part -III	Total
2023-24	18	11	09	38
2022-23	16	12	19	47
2021-22	16	21	10	47
2020-21	21	13	05	39
2019-20	15	05	07	27
2018-19	11	08	08	27



Enrolment Position in U.G Programme Session - 2018-19 to 2023-24

Enrolment Position





**U.G. Pass Percentage Final Year
Session - 2018-19 to 2023-24**

Session / Year	Total No. of Appeared Students in Final Year	Total No. of Pass Student	Overall Pass Percentage
2023-24	09	09	100%
2022-23	19	19	100%
2021-22	10	10	100%
2020-21	05	04	80%
2019-20	07	07	100%
2018-19	08	08	100%



U.G. Pass Percentage Final Year Session - 2018-19 to 2023-24





Enrolment Position in Current Session Session – 2023-24

Session/Year	U.G	
	Female	Male
Part I	10 (Result awaited)	08 (Result awaited)
Part II	09	02
Part III	05	04
Total	29	21
Total (M+F)	50	
Pass Percentage	100%	100%



Wet Laboratory

Department of Biotechnology





Class Room Department of Biotechnology





Our Distinguished Alumni Members

Sl. No.	Name of the Alumni with Address	Pass out Session	Organization Name/Address	Designation
01.	Dr. Vikas Kumar	2010	U.G. Deptt of Biotechnology, S.P. Jain College, Sasaram	Assistant Professor
02.	Prabhakar Kumar	2010	Bihar State Govt. Teacher	High School Teacher
03.	Kanhaiya Kumar	2010	Bihar State Police	Constable
04.	Priyanka Kumari	2010	Bihar State Govt. Teacher	10+2 Science Teacher
05.	Pramhansh Kumar	2010	Bihar State Govt. Teacher	Primary School Teacher



Our Distinguished Alumni Members

Sl. No.	Name of the Alumni with Address	Pass out Session	Organization Name/Address	Designation
06.	Vikas Kumar Mishra	2014	ICAR, Ranchi	Junior Research Fellow
07.	Khushboo Kumari	2014	Bihar State Govt. Teacher	High School Teacher
08.	Smriti Suman	2015	Macleods Pharmaceuticals Pvt., Gangtok	Quality Control
09.	Chandrakala Tiwari	2015	Macleods Pharmaceuticals Pvt., Gangtok	Quality Control



Topper/Rank of our college U.G Students in University/District

Sl. No.	Session	Name of the Students	University Roll. No	Pass Percentage
1	2015-18	Priya Kumari	3010814012	82
2				
3				
4				
5				



Best Practices of the Departments

- Avoiding the use of disposable cups.
- Switching off bulbs and ceiling fans after classes.
- Fostering character development among students.
- Encouraging students to use helmets while driving.
- Promoting awareness against tobacco use.
- Supporting the Swachh Bharat Abhiyan initiative.



SWOC Analysis of the Department

Strength

- The use of biotechnology nucleus agriculture more sustainable & durable.
- Reduction of environment pollution
- In Medical Uses.
- Industrial Process
- Improvement in human health



SWOC Analysis of the Department

Weakness

- As cloning may result in miscues of this technique to produce genetic monsters
- Insects may become resistant over time & more harmful
- Mou Period= of GMO's will result in loss of biodiversity
- Ethical & Safety issues
- Bioterrorism & environmental issues



SWOC Analysis of the Department

Opportunities:

- Clinical technician
- Microbiologist
- Medical laboratory Scientist
- Bio Chemist
- Scientist
- Pharmaceutical



SWOC Analysis of the Department

Challenges:

- Loss of patents
- Bringing competition from biosimilars
- High R&D Costs
- Low R&D Productivity
- Unexpected gene iterations



Future Plan of the Department

- Artificial Intelligence
- Gene Editing
- Gene Sequencing
- Bio printing
- Bio manufacturing
- If any Awards/Excellence details of students



Thank
~ you ~

Department of Biotechnology