

32. Evaluative Report of the Department

1. Name of the Department: **School Of Studies in Biotechnology, Jiwaji University, Gwalior**
2. Year of establishment: **1996**
3. Is the Department part of a School/Faculty of the university?: **School of Studies**
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.): **M.Sc. in Biotechnology**
5. Interdisciplinary programmes and departments involved: **NA**
6. Courses in collaboration with other universities, industries, foreign institutions, etc.: **Nil**
7. Details of programmes discontinued, if any, with reasons: **Nil**
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System: **Semester**
9. Participation of the department in the courses offered by other departments: **Biochemistry and Botany**
10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	01	-	
Associate Professors	-	-	
Asst. Professors	02 (General + ST)	01	
Others	-	-	

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr. Sameer S. Bhagyawant	M.Sc., Ph.D.	Senior Lecturer	Plant Molecular Biology	12 year	M. Phil: 03 awarded Ph.D.; 06 Registered & 02 Awarded

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors:

- a. **Dr. T. Gopalakrishna, Outstanding Scientist (Rtd.) BARC, Mumbai**
- b. **Dr. Sharad Kale Scientist-H & Head, NABTD, BARC, Mumbai**
- c. **Dr. Anil Balapure, Chief Scientist, CDRI, Lucknow**
- d. **Dr. Nidhi Srivastava, Asso. Prof. Banasthali Vidyapith, Rajasthan**

13. (Percentage of classes taken by temporary faculty-programme-wise information
M.Sc. Biotechnology: 50%)

14. Programme-wise Student Teacher Ratio: **1:6**

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual: **02 (Filled) + 02 on daily-wager basis**

16. Research thrust areas as recognized by major funding agencies: **Biotechnology**

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise. :

Funding Agency	Tenure	Title	Grants Sanctioned
MPCOST, Bhopal	2006-2009 (Three Years)	Proteomics Approach for Improvement of Quality Traits in Chickpea (<i>Cicer aritinum</i> L.) Cultivars	2.75/- Lakhs
DRDE, Gwalior (task project)	2011-2012 (One Year)	“Isolation and Characterization of Antinutritional Factors in <i>Jatropha curcus</i> L.”	4.50/-Lakhs
UGC Major project	2011- 2014 (Three Years)	“Pharmacological Studies of Chickpea Lectin for its Mitogenic, Antifungal and Anti- HIV-1 reverse Transcriptase Activities”	8,46,800/- Lakhs

18. Inter-institutional collaborative projects and associated grants received

- a) National collaboration b) International collaboration

Nil

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received. : **Nil**

20. Research facility / centre with

- state recognition
 national recognition ✓
 international recognition

21. Special research laboratories sponsored by / created by industry or corporate bodies: **Nil**

22. Publications:

- * Number of papers published in peer reviewed journals (national / international) : **12 International Publications**
- * Monographs
- * Chapters in Books

- * Edited Books
 - * Books with ISBN with details of publishers:
Total 36 ITS partial sequences are submitted to gene bank i; JN599102.1-JN599121.1 and JN599122.1---- JN599137.1 of various *Cicer arietinum* isolates
 - * Number listed in International Database (For *e.g.* Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.): **Scopus**
 - * Citation Index - range / average **10**
 - * SNIP
 - * SJR
 - * Impact Factor - range / average **0.5-1.0**
 - * h-index
23. Details of patents and income generated : **Nil**
24. Areas of consultancy and income generated : **Nil**
25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad :

Worked under United Nations Development Programme (UNDP) in Eritrea (during 2008-2010), East Africa for 2 years appointed by Ministry of Education, at Eritrea Institute of Technology Asmara.

26. Faculty serving in
- a) National committees b) International committees c) Editorial Boards d) any other (please specify) :

Reviewer for Physiology and Molecular Biology of Plants (Springer Publications- impact factor 0.9.) ISSN: 0971-5894 (print version) ISSN: 0974-0430 (electronic version)

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs). :

Successfully completed the Refresher Course in Life Sciences (ID) Organized by UGC-Academic Staff College, Rani Durgawati University, Jabalpur from 02/06/2014 to 21/06/2014 under the UGC scheme and has been awarded the "A Grade".

Successfully completed the Refresher Course in Life Sciences (Biotechnology) conducted at the Department of Botany, University of Pune, Pune from 03/10/2012 to 23/10/2012 under the UGC scheme and has been awarded the **“A Grade”**.

Successfully completed the Refresher Course in Life Science held at UGC academic staff college, Kannur University, Kannur, Kerala from 03/-3/2011 to 23/03/2011 and obtained grade **“A Grade”**

Organized “Competitive events in Biotechnology for Gwalior Districts” on 12-13 February 2014 at SOS in Biotechnology, Jiwaji University, Gwalior successfully. I was the organizing secretary to this academic event. **This is the Maiden event that is organized by our School on the campus.**

Organized 15 days Hand on Training for Molecular-and-Immuno Diagnostics Sponsored by M. P. Biotechnology Council, Bhopal during 25 Feb- 11 March 214 at our School. Total 30 participants underwent training.

Organized “National Symposium on Frontiers in Biochemistry and Biotechnology” on 16-17 March 2012 at Jiwaji University, Gwalior successfully. I was the organizing secretary to this symposium.

Organized “five days NSS camp for Biotechnology students unit on 28th March 2012 to 03 March 2012. And organized various activities like orientation lectures, self development, dental check up and blood donation camp. Equally I was also one the members for blood donation. I received a letter of appreciation for organizing such camp from the G.R. Medical College, Gwalior.

Organized “Shrumdan” on the occasion of Environment day on 5th June 2011 at CHARAK UDYAN in association with Environment Sciences dept. and Charak Udyan teacher –in-charge successfully. On this occasion we arranged a lecture on Environment awareness by a great socialist and Environmentalist Mr. Hiralal Yadav, Mumbai

Attended NAIP sponsored National workshop on “Health benefiting phytoceuticals from vegetables, fruits and non food crops” held in the division of agricultural Chemicals, IARI during March 21-23, 2012

Attended Indo-US Symposium on “Modern Trends in Macromolecular Structures”, followed by “workshop on various aspects of macromolecular structure determination” held at Dept. of Chemistry, Indian Institute of Technology Bombay-Mumbai. February 21-24, 2011.

Attended “Workshop on Techniques in Bioinformatics” Organized by Department of Biotechnology, Indian Institute of Technology Madras- Chennai. January 20-22, 2011.

28. Student projects
- percentage of students who have done in-house projects including inter-departmental projects: **30-40 %**
 - percentage of students doing projects in collaboration with other universities / industry / institute: **60-70 %**
29. Awards / recognitions received at the national and international level by
- Faculty ✓; Received a letter of appreciation from a Chief Scientist-CSIR-CDRI, Lucknow due to systematic organisation of the 15 days hands on training at SOS in Biotechnology and contributing meaningfully in the best interest of the students.**
 - Doctoral / post doctoral fellows **Nil**
 - Students
30. Seminars/ Conferences/Workshops organized and the source of funding (national / International) with details of outstanding participants, if any.
- 1. National Symposium on Frontier in Biochemistry and Biotechnology arranged during 16 – 17 March, 2012 : UGC Funded.**
 - 2. National Seminar cum Workshop on “Applications of Bioinformatics In Life Sciences” arranged at SOS in Neuroscience during 08 - 09 March 2013. : DBT Funded.**
 - 3. Intercollegiate Competitive Events on Biotechnology arranged at SOS in Biotechnology during 12 - 13 February 2014: M.P. Biotechnology Council, Bhopal Funded.**
 - 4. 15 days Hands on Training Programme for “Molecular-& Immuno-diagnostics” arranged during 25 March --- 11 April, 2014: M.P. Biotechnology Council, Bhopal Funded.**
31. Code of ethics for research followed by the departments: **As per UGC-norms.**
32. Student profile programme-wise: (*Last 2 Years*)

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
M.Sc. Biotechnology	150-200	09	24	100%	100%

33. Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.Sc. Biotechnology	76%	-----	24%	-----

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

NET: ~ 45, GATE: 50 Banking Sectors: ~20 Defence Services: ~ 10

35. Student progression

Student progression	Percentage against enrolled
UG to PG	NA
PG to M.Phil.	NA
PG to Ph.D.	20%
Ph.D. to Post-Doctoral	-----
Employed <input type="checkbox"/> Campus selection <input type="checkbox"/> Other than campus recruitment	Campus Placement: Nil Other than campus recruitment: 60-80 %
Entrepreneurs	~ 5%

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	-----
from other universities within the State	-----
from universities from other States from	Maharashtra University, 100%
universities outside the country	-----

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period: **Nil**

38. Present details of departmental infrastructural facilities with regard to

a) Library : ~ **410 Books (collection including Reference & Text Books)**

b) Internet facilities for staff and students : **To All**

c) Total number of class rooms : **02**

d) Classrooms with ICT facility : **02**

d) Students' laboratories: **02**

e) Research laboratories: **02 (including one central instrumentation room)**

39. List of doctoral, post-doctoral students and Research Associates: **Nil**

a) from the host institution/university : 1) **Dr. Pratibha Yadav**

2) **Dr. Pramod Kumar Singh**

b) from other institutions/universities

40. Number of post graduate students getting financial assistance from the university.: **Nil**

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. : **Nil**

42. Does the department obtain feedback from
- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
 - students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
 - alumni and employers on the programmes offered and how does the department utilize the feedback?

Feedbacks are utilized to build up syllabus and training activity of the students for the current industrial requirement to empower the students.

43. List the distinguished alumni of the department (maximum 10)

**Dr. Nandita Sxena,
Scientist D, Toxicology Division,
DRDE, Gwalior**

**Dr. Shweta Saxena,
Scientist D, DIPAS,
New Delhi**

**Dr. Nidhi Srivastava
Associate Professor
Banasthali Vidyapith, Rajasthan**

**Dr. Jyotirmay Banergee,
Asst. Prof. - Neurology Division,
AIIMS, New Delhi**

**Mr. Ashish Mehta,
Scientist, Reliance Biotech,
Mumbai**

**Dr. Anshu Bhardwaj,
Scientist, CSIR- New Delhi**

**Dr. Akhilesh Tamrkar,
Scientist D, Division of Biochemistry,
CSIR-CDRI, Lucknow**

**Mr. Shashank Shivhare,
Scientific Officer,
Serum Institute of India,
Hadapsar, Pune**

**Ms. Anamika Saral
Scientist B
DBT, New Delhi**

**Ms. Pooja Narang
Scientific Officer
Qiagen-India Ltd., New Delhi**

**Dr. Amit Awasthi,
Scientist, BOSTON, USA**

**Dr. Brijendra Tripathi,
Eye Institute, NIH, USA**

**Dr. Anugya Mehta,
Scientist, Shree Tirunal Institute of Medical Sciences,
Thiruananthapuram (Kerala)**

**Ms. Abha Srivastava
Officer, Central Bank of India,
Gwalior**

**Mr. Ashwani Anand
Probationary Officer
State Bank of India, Aligarh, UP**

**Mr. Ashwani Pandey
Area Manager
Cryobank International India Ltd.
Mumbai, India**

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Workshops and Seminars are the major activities that we organise every year to create platform for students' interactions with the eminent personalities across the country.

- 3) List the teaching methods adopted by the faculty for different programmes.

1. **Timely power point presentation of the students**
2. **Industrial visit**
3. **Group Discussions**
4. **Internal Assessments**
5. **Home assignments**
6. **Seminar etc.**

- 2) How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Students are exposed to latest development in Biotechnology by inviting Eminent Scientist/Professor of the field on regular basis. UGC-extension lectures are arranged and when required. Also the external examination appointed by the University is requested to deliver lectures in their field of expertise. Majority of our visiting professors conduct interactive classes and makes the students to discuss the topic openly.

- 5) Highlight the participation of students and faculty in extension activities.

Every year the new batch of students are registered for NSS. They are exposed to orientation programmes by the University NSS coordinator. Then throughout the year all students actively participates in various social activities like "Safai Abhiyan", Blood donation camp, plantation programme etc.

45. Give details of "beyond syllabus scholarly activities" of the department.

1. **Organisation of Blood Donation Camps**
2. **Anti- ragging lectures**
3. **Motivational Lectures**
4. **Competitive Events etc.**

46. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. **Nil**

47. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

Syllabus has been designed keeping in view requirement of the industry and regularly updated with the latest technology.

48. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

**Strengths: High % of NET qualified Students and doing Ph.D at reputed Institutes in the Country and abroad.
Most of the students are well placed and settled in India and Abroad**

Weakness: Space and not have regular faculty

49. Future plans of the department.

To develop consultancy and University-Industry interaction.