

ANNUAL QUALITY ASSESSMENT REPORT

Name of the School: School of Biotechnology

Year of Report: 2011-2012

PART A The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year.

1. Curricular Aspect	<ul style="list-style-type: none">• Grade-Credit System is followed• Our M.Sc. Biotechnology is recognized and funded by Department of Biotechnology (DBT), Govt. of India. We are also running some of the most advanced courses of Biological sciences including Genetic Engineering and Bioinformatics• The course curriculum is regularly updated. Last updated in 2011-12• Curriculum development process is based on the recommendations of DBT, various experts from the academics and corporate sector and student feedback on course content and design• The updating of syllabus focused the changing needs of time• Informal feedback from ex-students also taken into consideration• Faculties work for the development of Scientific aptitude and general attitude of students• State governments norms are followed in admission process for reserved categories and women• Remedial sessions are organized for weaker students and enrichment sessions for the brighter ones.• Our faculties provide full freedom to students that they can ask any query any time at any place.
2. Teaching – learning and Evaluation	<ul style="list-style-type: none">• Seminar hall is equipped with multimedia projectors• Lectures are supplemented by assignments, seminars and

practical

- Experiments conduct in the area of recombinant DNA Technology, Cell Biology, Enzyme Technology and Drug Discoveries and Therapeutics are the major scientific areas
- To hone the research skills and thinking, a 06 months dissertation is a part of our course curricula
- Teacher student ratio is 1:10
- We have a good team of young, energetic and qualified faculties under the guidance of a senior professor (01Professor, 09 Lecturers)
- Besides, we have research staff of Bioinformatics sub-centre to support Bioinformatics course and research in all the ongoing areas of department
- Ph.D. qualified faculty as on date is over 20%, but 60 % are NET qualified
- Vacancies in regular faculty positions are being met by contractual appointments and visiting faculties
- Training programs and workshops in the area of Biotechnology and Bioinformatics are conducted every year
- Continuous and comprehensive evaluation process is followed with three sessional examination , end semester exam in each course
- Complete transparency is a key feature of our evaluation system
- Students are empowered to design time table of examination to consider the convenience but to adhere with the examination schedule
- Timely evaluation of answer sheets and declaration of results.
- Students' are given feedback on their performance and answer sheets are shown to them
- Result processing is computerized

	<ul style="list-style-type: none"> • Teaching learning process with ICT component • Comprehensive Viva-Voce provides an external audit to the evaluation system • Innovative evaluation practices used by considering the research article presentations, experimental ideas sharing, logistic approaches in scientific vision etc. • Biostatistics, basic computer applications and bioinformatics are some of the hallmark to develop research skills among PG students • In time table, two classes per week are scheduled for departmental seminar • Many cultural and sports activities are conducted including Annual function, freshers, farewell, induction program and interdepartmental matches
3. Research, consultancy and Extension	<ul style="list-style-type: none"> • M.Sc. biotechnology program and Bioinformatics-sub-centre are funded by DBT, Govt. of India • National seminar on “Industrial facet of Biotechnology” was organized on Jan 24-25, 2012. • One day Seminar was hosted on Rajya Jalvayu Parivartan Karyojana in 2011, which was organized by EPCO, Bhopal • Approximate 20 research papers and 01 book are published in 2011-12 • We have made some National and International collaborations (mentioned in next section)
4. Infrastructure and Learning Resources	<ul style="list-style-type: none"> • We have more than 50 computers for students and faculties • Our students having complete freedom to access of any laboratory equipments and chemicals • We have 10 well equipped laboratories
5. Student Support and Progression	<ul style="list-style-type: none"> • Most of the students absorbed in national and international research institutes

	<ul style="list-style-type: none"> • Our 90 % students clear CSIR-NET-JRF, NET-LS, GATE, ICMR, DBT-JRF, IISc Bangalore, NCBS, Bangalore, TIFR, Mumbai, NII, New Delhi, JNU New Delhi and other national level competitions for jobs in different sectors • Students avail of Hostel, internet and Health facilities of the University • Grievances redressal mechanism exists and counseling is provided to students by conducting teachers-student meetings • Remedial classes are arranged for weak students • Special Guidance is given to students aspiring to National or International level competitions and research publications • Students participated in University Cultural and Sports activities and also part of our every committee • Our students won ‘Best disciplined students award’ of the University-2011-2012
<p>6. Governance & leadership</p>	<ul style="list-style-type: none"> • Full academic autonomy • Faculty involved in Selection, Examination and Professional Development activities of the Universities • Consultancy and support to Schools in conducting Selections, Management and Professional Development activities • Academic Calendar is strictly followed. Teaching schedule is adhered to and syllabus is covered on time • Strong emphasis on classroom teaching • Results declared on time • Assessment of students is undertaken through regular and continuous evaluation and end semester examination • Student feedback system is followed for continuous improvement

7. Innovative practices	<ul style="list-style-type: none"> • Exploring new horizons of biological sciences towards corporate entry, selection and success • Faculties provide a vision to become good human being along with the success in professional and personal fronts
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Part B: Action Taken during the Year

01	Activities reflecting the goals and objectives of the institution	<ul style="list-style-type: none"> a. Regular teaching with teaching aids b. Syllabi coverage: 100 % and full promotion of research activities c. Provide concepts to crack various competitive examinations.
02	New academic program initiated (UG and PG)	None during 2011-12
03	Innovations in curricular design and transaction	Syllabus of MSc Biotechnology was updated in 2011 for 2012 and revised completely. Similarly, the revision was also made in the syllabus of Gen. Eng. and Bioinformatics course. Student feed back was consider to update the syllabus. Student feed back was taken after every six months, in July and in December.
04	Inter-disciplinary programmers started	Biostatistics and Computer Applications paper already existed
05	Examination reforms implemented	Semester system is followed and the answer sheets were shown to the students after evaluation.
06	Candidates qualified NET/SLET/GATE etc.	GATE: 13 NET: 08 DBT-JRF: 01
07.	Initiative towards faculty development programme	Dr. H.S. Parmar, participated a UGC sponsored training programme at Jamia Hamdard, University, New Delhi. (Dec. 16 to 21, 2010).
08	Total number of seminars/workshops conducted	Total 02 1. Workshop on Computational biology and molecular dynamics (Jan 20-22, 2011). 2. Discussion and presentations on Climate change, jointly hosted by EPCO, Bhopal and us.
09	Research projects a) Newly implemented b) Completed	Projects completed: <ol style="list-style-type: none"> 1. TWAS-DBT research project for Mr. Krityanand Kumar Mahatman (PI: Dr. Anil Kumar) completed on Sept 30, 2010. 2. CSIR-Research Project ‘ isolation, purification, characterization and immbolization of glucose isomerase’ for Ms. Garima Dubey (PI: Dr. Anil Kumar), started on 07/12/2010. 3. DBT’s M.Sc. Biotechnology Programme is in progress since 1991 (PI: Dr. Anil Kumar) 4. DBT’S distributed Bioinformatics sub centre is in progress since 1993 (PI: Dr. Anil Kumar). Dr. Anil Kumar communicated one research project to MPCST, Bhopal. Dr. H.S. Parmar communicated two research projects, one in UGC, New

		Delhi and another in the M.P. Biotechnology council, Bhopal.
10.	Patents generated if any	None
11.	New collaborative research program	<p>Research Collaborations</p> <ol style="list-style-type: none"> 1. MOU signed for research collaboration with Institute of Animal Physiology and Genetics, Libechov, Czech Republic. 2. Collaboration is on progress with Kunk University, Korea. 3. Collaborate for summer training programme with University of Poitiers, France. 4. NCCS, Pune. 5. One to one collaboration of Dr. Anil Kumar with NEERI, Nagpur, Dr. Asha Juwarkar. 6. One to one research collaboration of Dr. H.S. Parmar with Dr. E. Manivannan of School of pharmacy.
12.	Research grants received from various agencies	<p>DBT-M.Sc. Programme: 13 Lacs and 4 thousands DBT grant for Bioinformatics sub centre: 16 Lacs and 71 thousands University contingency: 70,000/- Visiting faculty grant: 50,000/- Total grant: 30 Lacs and 95 thousands rupees only.</p>
13	Details of Research scholars	06 Research Scholars are working under the supervision of Dr. Anil Kumar
14.	Citation index of Faculty members and impact factor	<p>Dr. Anil Kumar: cumulative impact factor: ~ 200</p> <p>Dr. H.S. Parmar: Number of publications: 15 (All in international journals) Total cumulative index ~ 35 h-index 7 Citations 81 (as per Scopus database; excluding self citations).</p>
15	Honors/Awards to the faculty	<p>Fellowship of World Society of Cellular and Molecular Biology To Dr. Anil Kumar. Fellow of Association of Pharmacy and Biotechnology to Dr. Anil Kumar Fellow of Society of Plant Research.</p> <p>Dr. H.S. Parmar received Best Science research award from MPCST, Bhopal in 2009-2010.</p>
16	Internal resources generated	Self finance Courses M.Sc. Genetic Engineering and Bio-informatics.
17.	Details of departments getting SAP, FIST, etc	None

	assistance/recognition	
18.	Community services	We always provide career guidance without any charge to students of all classes and we always are in forefront to help the down people of the society.
19.	Teachers and officers newly recruited	None.
20.	Teaching-Non-teaching staff ratio	2:1
21.	Improvements in the library services	New Books with latest titles have been added in the Departmental Library.
22.	New books/journals subscribed and their Value	Nature Journal of Bioscience and Bioengineering
23.	Courses in which Student Assessment of Teachers is introduced and the action taken on student feedback.	M.Sc. Biotechnology, Genetic Engineering and Bioinformatics. Student's Feedback was analyzed. Overall rating about the department and teachers was very good.
24.	Unit Cost of Education. Unit cost = total annual expenditure budget (Actual) divided by the number of students enrolled.	~ 2, 00000/- per student.
25.	Computerization and Administration and the process of Admissions and examination, result issue of certificates.	Our department library is fully computerized. However, accounts are not computerized. Our M.Sc. Biotechnology admissions are through combined entrance examination (CEEBS) of Biotechnology, conducted by JNU, New Delhi. We conduct joint entrance test (JET) for five industrial sponsored seats for M.Sc. Biotechnology, M.Sc. Genetic Engineering and Bioinformatics. Admissions are strictly on the merit basis in the entrance test.
26.	Increase in the infrastructural facilities.	Building extension nearly 7000 square feet. New equipments have been purchased 10 PCs, 01 Server, Furniture are being purchased during 2010 and 2011. 2 New Labs, 2 Seminar hall cum classrooms and 1 Faculty room have been added in the present infrastructure. Upgradation of laboratories with CO2 Incubator and ELISA Plate reader with accessories.
27.	Technology up gradation.	Networking facility through IT center with 30 Computers and 06 LCD projectors are available.

28	Computer and internet excess and training to teacher and students.	Yes
29.	Financial aid to students.	Govt. aid is provided to SC/ST candidates Beside Studentship to M.Sc Biotechnology Studentship is provided by the DBT who secure admission through CEEB.
30.	Activities and support from the Alumni Association.	Alumni help students to find vacancies and research programmes.
31.	Activities and support from the parent Teacher Association.	We conducted meetings of parent teacher association (Jan 15, 2011) and the next meeting is scheduled on Aug, 2011. We give feedback to parent about their wards and also listen if they have any grievances and try to remove the same.
32.	Health Services.	Students are provided Health Centre facility by the University.
33.	Performance in sports activities.	Students participated in Inter Departmental Sports activities.
34.	Incentives to outstanding sports persons.	We have given free hands to students deciding about schedule of class tests and semester examinations as per their convenience.
35.	Students achievements and awards.	08 students qualified NET and 13 qualified GATE Awards for Essay and Quiz competition sponsored by MPCST were presented to the students. Many students placed in Ph.D. through various National and International research programmes. After Ph.D all students get good placement (PDFs) internationally and nationally.
36.	Activities of the Guidance and Counseling Units.	Discussion with students and research scholars is held to provide information and to encourage them in various scientific activities during regular student teachers meetings.
37.	Placements services provided to student.	One teacher is placement officer, who provide the counseling regarding placements.
38.	Development programmes for Non- teaching staff.	Our school is not having any regular non-teaching staff. We are hiring contract services.
39.	Healthy practices of the institution.	Regular and quality teaching Active participation in research activities Departmental harmony in working ambience. For quality assurance, self analysis and feedback from students was practiced.
40.	Linkages developed with National/ International, Academic/Research bodies.	Collaborations and MOUs exist (as mentioned above).

41.	Any other relevant information the institution wishes to add	Department works for the overall development of the students through regular teaching and discussion with the students.
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Part C: Detail the plans of the institution for the next year:

- Development of laboratory equipments (minor) and furniture facilities in newly constructed extension of the building.
- Purchase of HPLC and Fermenter out of the grants of UGC XI plan and MPCOST, Bhopal.
- Development of Web Based Research Model
- Organization of Summer Programs for Teacher / students
- Organization of Seminars, Conferences and Workshops at State, National and International levels
- Strengthen the placement, guidance, counseling and extension service cells
- Up gradation of Computer facilities out of Bioinformatics-sub centre grant.
- To increase the number and titles of books in departmental library
- Purchase of interactive white boards for each classroom and seminar rooms
- Purchase of split ACs for newly constructed building (extension)
- Appointment of regular Qualified and Research Oriented Faculty
- To strengthen research activities, new research projects will be submitted to various funding agencies
- Faculty participation in Seminars, Conferences and visits will be encouraged
- Collaborative research activities at Global level will be promoted.

**Name & Signature of the
Coordinator IQAC**

**Name & Signature of the
HEAD, UTD**