

## ANNUAL QUALITY ASSESSMENT REPORT 2012-13

Name of Institute: SCHOOL OF BIOCHEMISTRY, DAVV, INDORE

Year of Report: 2012-13

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.

### Part A

1. Curriculum Aspects	<ul style="list-style-type: none"><li>• The syllabus covers all the major areas of Biochemistry including basic, advanced as well as specialized courses.</li><li>• The course includes theory, practicals as well as project work.</li><li>• Curriculum is updated from time to time to meet emerging needs of students. Recent advances in the field of Biochemistry are included. Last update was in May, 2013.</li><li>• Grade-Credit system is followed.</li><li>• Feedback is obtained from the students for all the courses. The analysis of feedback is used to improve quality and for curriculum enrichment. Feedback analysis is available on the university website.</li><li>• Feedback on the performance of students, design of curriculum etc. was obtained from various external experts from other universities and central scientific institutions.</li><li>• Students were provided Hands on training at Raja Ramanna Centre for Advanced Technology (RRCAT) for protein purification and crystallography from 23 to 24, Sept, 2013.</li><li>• Employability of students is generally in the research field, pharmaceuticals, food and health sectors. About 50% students go for research.</li><li>• The meetings of Board of Studies are regularly held for the upgradation of the Course.</li><li>• Additional skill oriented programmes such as computer skills among the students have been introduced. For the last 5 years subject like Bioinformatics and Computer Application to Biology were introduced in the curriculum.</li></ul>
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2. Teaching Learning and Evaluation	<ul style="list-style-type: none"> <li>• (1) <b>Admission process:</b> Advertisement for the admission to the M.Sc. Course is done by publication in National dailies and is also available on the University Website. The admission is through an All India Entrance Examination and is on merit in the entrance test. Candidates with Chemistry and any other Biology subject in B.Sc. are eligible for the course.</li> <li>• Intake of student of 30 per year.</li> <li>• Reservation for SC/ST/OBC are as per MP Government Policy.</li> <li>• (2) <b>Catering to diverse needs of students:</b> Orientation programme for fresher's covering major issues such as ragging at University and department level.</li> <li>• (3) <b>Teaching learning process:</b> The School has 5 Faculty members (Prof 2, Reader 2, Cont. Teacher 1) with specialization in the fields of Plant Biochemistry, Clinical Biochemistry, Toxicology, Membrane Biology etc.</li> <li>• All faculty members are Ph.D. in the subject.</li> <li>• Teacher Student ratio is about 1:12.</li> <li>• Teachers are motivated to attend seminars, workshops.</li> <li>• In each semester there are 4 to 5 papers (3 credit hrs theory classes per day) and 10 credits laboratory work (20 hours per week).</li> <li>• In addition, all the students delivered seminars of 2 Credit per week.</li> <li>• At present, about 19 Research scholars are working in the department. Out of these, some of them are also working at other nationally recognized laboratories. A number of research papers have been published in the national as well as international journals.</li> <li>• The department strictly follows University academic calendar for the course.</li> <li>• Syllabus has been revised in May, 2013 and is available on the university website.</li> <li>• Curriculum is completed within in the stipulated time frame and calendar.</li> </ul>
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	<ul style="list-style-type: none"> <li>• Student centric learning method including discussion and interaction with students to improve understanding of the subject among students.</li> <li>• Subject experts are invited to deliver lectures. Six seminars were organised in the year 2012-2013. Eminent scientists/experts delivered the lectures in these seminars.</li> <li>• M.Sc. IV semester students undergo project training for six months at National laboratories/Universities/reputed institutions.</li> <li>• The project is evaluated by the Board of examiners including one External examiner.</li> <li>• School uses LCD projector, OHP and blackboard teaching.</li> <li>• (4) <b>Teacher quality:</b> There are 2 Professor (1 MPS, 1 CAS) and 2 Readers in the department. One Contract Teacher joined in August, 2013. One post of Professor and 1 post of Reader (ST) are vacant and have been advertised. Additional 2 Faculty members (Guest Lecturers) are invited to teach Biostatistics and Bioinformatics. All the teachers have Ph.D. qualification with wide experience. Two Faculty members have served as resource persons in Workshops/Academic staff programmes during 2012-13.</li> <li>• All the faculty members use computer, internet and audio visual aids.</li> <li>• (5) <b>Evaluation Process and Reforms:</b> The examination result is declared within 2-3 weeks of the examination. The current system of evaluation is in practice from 1991 and it has been observed to be very satisfactory.</li> <li>• The evaluation of teachers by the students is in the form of feedback.</li> <li>• Continuous and comprehensive evaluation of the students takes place during the course. This includes 2 class tests followed by a final examination for each theory papers. Grades are awarded as per Ordinance 31.</li> <li>• Transparency in evaluation process is ensured as answer books are shown to candidates and also question paper is discussed in the class.</li> <li>• No case of grievances in examination has been reported for</li> </ul>
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	<p>the last many years as answer books are shown to students and grievances if any are resolved.</p> <ul style="list-style-type: none"> <li>• Student performance mostly is good.</li> </ul>
<p>3. Research, Consultancy and Extension</p>	<ul style="list-style-type: none"> <li>• (1) <b>Promotion of Research:</b> Entrance examination for the Ph.D. programme was conducted on 29.11.2012. Research Degree Committee evaluates the synopsis of candidates, for registration of the candidates.</li> <li>• Six National seminars on Intellectual Property Rights, Phytoremediation of Degraded Environment: Emerging Issues and Challenges, Biosafety, Genetically Modified Crops, World Animal Day, and National Mathematics Day were organised in the year 2012-2013.</li> <li>• The research projects were funded by the grant available with the Faculty members.</li> <li>• (2) <b>Research and Publication:</b> The department is running 3 external funded projects: <ol style="list-style-type: none"> <li>1. MPCST Research Project entitled “A study on antioxidative, antidiabetic and anti-inflammatory activity of herbal and natural products” under Dr. Deepak Bhatnagar. Grant- Rs. 4.93 Lakhs. (2012-2013).</li> <li>2. UGC Major Research Project entitled “Characterization of structural features and interactions of erythrocyte membrane proteins of some non-human mammals” under Dr. S.M. Gokhale Grant- Rs. 6.20 Lakhs. (2010-2013).</li> <li>3. MPCST Research Project entitled “Osmotic stress-induced changes on chlorophyll metabolism and antioxidative system in maize leaves” under Dr. Meeta Jain. Grant- 3.90 Lakhs (2010-2013).</li> </ol> </li> </ul>
	<ul style="list-style-type: none"> <li>• <b>List of Publications (2012-13)</b> <ol style="list-style-type: none"> <li>1. Tyagi R, Rana P, Gupta N, Khan AR, Bhatnagar D, Bhalla PJS, Chaturvedi S, Tripathi RP and Khushu S (2013). Differential biochemical response of rat kidney towards low and high doses of nickel chloride as revealed by NMR spectroscopy. J. Applied Toxicology 33,134-41. ISSN 1099-1263. (Impact factor 2.597).</li> <li>2. Amit Kumar Dixit, Deepti Bhatnagar, Vineet Kumar, D. Chawla, K. Fakhruddin, D Bhatnagar (2012). Antioxidant potential and radioprotective effect of soy isoflavone against gamma irradiation induced oxidative stress. J.</li> </ol> </li> </ul>

	<p>Functional Foods 4, 197-206. ISSN 1756-4646. (Impact factor 2.742).</p> <p>3. Dixit AK, Bhatnagar D, Kumar V, Rani A, Manjaya JG, and Bhatnagar D (2012). Influence of gamma irradiation on in vitro lipid peroxidation and antioxidant properties of soybean with different seed coat color. International Journal of Food Properties 15: 1171-1181. ISSN 1094-2912. (Impact factor 0.877).</p> <p>4. Deepti Dixit, Amit Kumar Dixit, Harsha Lad, PJS Bhalla, Deepak Bhatnagar (2012). Protective effects of <i>Terminalia chebula</i> in modulating oxidative damages against gamma irradiation induced lethality in rats. International Journal of Biological and Pharmaceutical Research, 3, 734-742. ISSN 0976-3651. (Impact factor 1.34).</p> <p>5. Deepti Dixit, Amit Kumar Dixit, Harsha Lad, Damodar Gupta, Deepak Bhatnagar. Radioprotective effect of Terminalia chebula Retzius extract against <math>\gamma</math>- irradiation induced oxidative stress. Biomedicine and Ageing Pathology 3(2): 83-88 (2013). ISSN: 2210-5220.</p> <p>6. Tyagi R, Rana P, Gupta M, Khan AR, M. Memita Devi, Bhatnagar D, Roy R, Tripathi RP and Khushu S (2012). Urinary metabolomic phenotyping of nickel induced acute toxicity in rat: an NMR spectroscopy approach. Metabolomics 8: 940-950. ISSN 1573-3882. (Impact factor 4.433).</p> <p>7. Sinha V, Kumar A, Bhatnagar D and Khan JA (2013). Association of Cotton leaf curl Multan virus and its satellite molecules with leaf curl disease of papaya in India. New Disease Reports 27, 9. ISSN 2044-0588.</p> <p>8. Gupta P, Jain M, Juliana S, Gadre R (2013) Inhibition of 5-aminolevulinic acid dehydratase by mercury in excised greening maize leaf segments. Plant Physiol. Biochem. 62, 63-69. ISSN 0981-9428. (Impact Factor 2.976).</p> <p>9. Kumar J, Gunapati S, Singh SP, Kumar A, Lalit A, Sharma NC, Puranik R and Tuli R (2013) A new betasetallite associated with cotton leaf curl Burewala virus infecting tomato in India: influence on symptoms and viral accumulation. Arch. Virol., ---- (DOI10.1007/s00705-013-1613-y). ISSN 0304-8608. (Impact Factor 2.030).</p> <p>10. Sharma S and Gokhale SM (2012) Differential actions of proteinases and neuraminidase on mammalian</p>
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	<p>erythrocyte surface and its impact on erythrocyte agglutination by concanavalin A. <i>Gen. Physiol. Biophys.</i> 31, 457–468. ISSN 0231-5882. (Impact factor 1.192).</p> <p>11. Sharma S, Zingde SM and Gokhale SM (2013) Identification of human erythrocyte cytosolic proteins associated with plasma membrane during thermal stress. <i>J. Membrane Biology</i> 246, 591-607. ISSN 0022-263. (Impact factor 2.478).</p> <p>12. Malviya P, Sai Prasad SV, Jain M and Gautam A (2012). Assessing grain yield and its components in durum wheat using canopy temperature as selection parameter under early heat stress conditions. <i>Progressive Research</i> 7, 122-126.</p> <p>13. Jain M, Mittal M and Gadre R (2013) Effect of PEG-6000 imposed water deficit on chlorophyll metabolism in maize leaves. <i>J.Stress Physiol. Biochem.</i> (In press). ISSN 1997-0838.</p> <p>14. Wright WS, Yadav AS, McElhatten RM and N. R. Harris. (2012) Retinal blood flow changes following six months of hyperglycemia in the Ins2-Akita mouse. <i>Experimental Eye Research</i>, 98, 9-15. ISSN 0014-4835. (Impact factor 3.259).</p> <ul style="list-style-type: none"> <li>• Collaboration of Faculty members with National laboratories as shown in Part B.</li> </ul>
<p>4. Infrastructure and Learning Resources</p>	<ul style="list-style-type: none"> <li>• (1) <b>Physical facilities:</b> At present, the department building is approx. 1200 sq meters on the ground floor. Construction of about 500 sq. meters, including 2 Research Laboratories, 1 Seminar hall and one Faculty room on the first floor of the building has been completed by the support of UGC XIth Plan Grant.</li> <li>• Laboratories are equipped with analytical instruments such as HPLC, Ultracentrifuge, spectrophotometer etc.</li> <li>• School has a well established Departmental Library with latest editions of books. The facility of INFLIBNET and electronic journals is available with the university and is widely used by the students, research scholars and faculty members.</li> <li>• IT centre as learning resources: The University has IT centre which provide internet facility to all the departments.</li> <li>• Conducive physical ambience with adequate Research laboratories and faculty rooms.</li> </ul>
<p>5. Student Support and Progression</p>	<ul style="list-style-type: none"> <li>• There are 21 and 23 students in M.Sc. Previous and Final year Biochemistry Course respectively. Govt. reservation</li> </ul>

	<p>policy is implemented as per rules.</p> <ul style="list-style-type: none"> <li>• Most of the students go for higher studies as research fellow. Two students qualified GATE in the year 2012-13.</li> <li>• Job opportunities in academics and industry.</li> <li>• The syllabus and other details are available on the departmental website.</li> <li>• Students actively participated in Essay and Quiz competition, which was held by the support of MPCST, Bhopal on 21.04.2013.</li> </ul>
6. Governance and Leadership	<ul style="list-style-type: none"> <li>• Full academic autonomy.</li> <li>• Faculty involved in Selection, Inspection of various colleges, Examination and Professional Development activities of the Universities.</li> <li>• Examination results of the department are declared on time.</li> </ul>
7. Innovative and best practices	<ul style="list-style-type: none"> <li>• There are regular meetings of the Faculty members within the department as well as at the University Level.</li> <li>• All efforts are made to implement suggestions from Faculty members and students for quality improvement.</li> <li>• The students are shown the answer books and the questions are discussed in the class. The students have the opportunity to discuss the answers and clear doubts if any, with the Faculty members. Grades are awarded after the answer books are shown to the students.</li> <li>• Internet facility is available to the students.</li> <li>• Plantation has taken place around the Dept.</li> </ul>

### **Evaluative report of the Department**

#### Faculty Profile

Number of Faculty members in position:

A) Professor	2 (1 MPS, 1 CAS)
B) Reader	2
C) Contract Teacher	1

Name of the Faculty Member	Designation	Highest Qualification
Dr. D. Bhatnagar	Professor	Ph.D.
Dr. Rekha Gadre	Professor	Ph.D.
Dr. S.M. Gokhale	Reader	Ph.D.
Dr. Meeta Jain	Reader	Ph.D.
Dr. Amit Singh Yadav	Contract Teacher	Ph.D.

#### **Plan on improvement:**

School has a Building with 1200 square meter covered area. 2 new Labs, 1 seminar hall and 1 Faculty room have been constructed. Departmental Library with 1000 + books, 24x7 Internet,

Multimedia/ LCD in classrooms are available. A few research projects have been sanctioned to departmental Faculty by different funding organizations. Books on recent and advanced topics of biological sciences, and purchase of equipments will be undertaken in the year 2013-14 by the support of UGC XII plan grant.



**Name & Signature of the  
Coordinator IQAC**

**(Deepak Bhatnagar)  
Name & Signature of the  
Head, School of Biochemistry**

**Professor & Head**  
School of Biochemistry  
Devi Ahilya University  
Khandwa Road, Indore (M.P.)

### ASSESSMENT STATUS REPORT OF UTD

Name of the School: **School of Biochemistry**

Year of Report: **2012-2013**

**Part B:**

1.	Activities reflecting the goals and objectives of the institution	<ul style="list-style-type: none"> <li>• Regular teaching with teaching aids.</li> <li>• Syllabus coverage in details.</li> <li>• Promotion of research activities.</li> <li>• Seminar presentation by students.</li> <li>• Project work of 5-6 months undertaken by M.Sc. students.</li> </ul>
2.	New academic program initiated (UG and PG)	<ul style="list-style-type: none"> <li>• None</li> </ul>
3.	Innovations in curricular design and transaction	<ul style="list-style-type: none"> <li>• Grade-Credit semester system.</li> <li>• Class room teaching by OHP and LCD.</li> <li>• Syllabus has been revised and upgraded in May 2013. Elective subjects have been shown and one paper on scientific writing has been added in 2013.</li> </ul>
4.	Inter-disciplinary programmes started	<ul style="list-style-type: none"> <li>• Biostatistics and Computer Applications papers already existed.</li> </ul>
5.	Examination reforms implemented	<ul style="list-style-type: none"> <li>• Semester system is followed and the answer sheets are shown to the students after evaluation. Discussion on the answers is held</li> </ul>



		to make more understanding on the subjects.
6.	Candidates qualified NET/SLET/GATE etc.	<ul style="list-style-type: none"> <li>Two students qualified GATE.</li> </ul>
7.	Initiative towards faculty development programme	<ul style="list-style-type: none"> <li>All the Faculty members have collaboration work with other Universities/ Central Lab.</li> <li>Faculty is encouraged to participate in various national and International seminars/conferences.</li> <li>Students deliver seminar on every Saturday. Two hour slot is allocated for it.</li> <li>All faculty members are provided Computers and Internet facility.</li> </ul>
8.	Total number of seminars/workshops conducted	<ul style="list-style-type: none"> <li><b>Seminars</b></li> <li>1) A seminar was organized by School of Biochemistry, DAVV, Indore on the following topic: “Phytoremediation of Degraded Environment: Emerging Issues and Challenges” on Sept, 25, 2012. Speaker: Dr. R.P.Singh, Professor, Dept. of Environmental Sciences, Babasaheb Bhimrao Ambedkar University, Lucknow.</li> <li>2) National Mathematics Day was celebrated on 22 December 2012, supported by M.P. Council of Science and Technology, Bhopal and organized by School of Biochemistry/Mathematics, DAVV, Indore. Dr. N. Shradha, Professor, TIFR, Mumbai delivered a talk on Analytical Number Theory.</li> <li>3) A seminar was organised by School of Biochemistry, DAVV, Indore, on the theme “Intellectual Property Rights” on October, 13, 2012. The seminar was sponsored by M.P. Council of Science and Technology, Bhopal. The speakers and the topic were as follows. <ul style="list-style-type: none"> <li>i) Dr. G.K. Gupta, Principal Scientist, Directorate of Soybean Research, Khandwa Road, Indore. Topic: Intellectual Property Rights relevant to Indian agriculture.</li> <li>ii) Dr. N.K. Choubey, Scientist and Incharge, PIC, MPCST, Nehru Nagar, Bhopal 462003. Topic: Introduction to Intellectual Property.</li> <li>iii) Prof. Ghayur Alam, Ministry of HRD Chair, Professor of IP Law, Chairperson, Centre of Science, Technology and Law, The National Law Institute University, Bhopal 462002. Topic: An Overview of IPR spectrum in India.</li> <li>iv) Ms. Raunak Dubey, Executive, Intellectual Property Facilitation Centre, Confederation of Indian Industry, Indore, 452010. Topic: Success story of India related to patents.</li> </ul> </li> <li>4) “First University – Industry Partnership Meet” was organized by</li> </ul>

		<p>Devi Ahilya Vishwavidyalaya, Indore on February, 08, 2013.</p> <p>5) A National seminar on “Genetically Modified Crops” supported by MPCST, Bhopal, was held on 14.09.2013 at School of Biochemistry, DAVV, Indore. Speaker: Dr. Phundan Singh, Former Director, Central Institute for Cotton Research, Nagpur.</p> <p>6) A seminar on “Biosafety” was conducted on 20.09.2013. Talk was delivered by Dr. S.C. Dubey, High Security Animal Disease Laboratory, IVRI, Bhopal.</p> <p>7) A seminar on “World Animal Day” was organised on 4.10.2013 at School of Biochemistry, DAVV, Indore. The speakers were Dr. U.K. Garg, Dean and Professor, Dept. of Pathology, Veterinary College, Mhow, and Dr. B.S. Karada, Sr. Scientist, Institute of Animal Health and Veterinary Biologicals, Mhow.</p> <ul style="list-style-type: none"> <li>• Essay competition was held for the students by the support of MPCST, Bhopal on 21.04.2013. The competition was open for science students of Devi Ahilya University and its affiliated Colleges. The Science Quiz was also organized at the School of Biochemistry on 21.04.2013.</li> </ul>
9	<p>Research projects</p> <p>A) Newly implemented</p> <p>B) Completed</p>	<p>A) Newly implemented: MPCST Research Project entitled “A study on antioxidative, antidiabetic and anti-inflammatory activity of herbal and natural products” under Dr. Deepak Bhatnagar. Grant-Rs. 4.93 Lakhs. (2012-2013).</p> <p>B) Completed</p> <p>1) UGC Major Research Project entitled “Radioprotective effect of dietary constituents against gamma irradiation induced oxidative stress” under Dr. Deepak Bhatnagar. Grant- Rs. 8.71 Lakhs. (2009-2012).</p> <p>2) UGC Major Research Project entitled “Characterization of structural features and interactions of erythrocyte membrane proteins of some non-human mammals” under Dr. S.M. Gokhale Grant- Rs. 6.20 Lakhs. (2010-2013).</p> <p>3) MPCST Research Project entitled “Osmotic stress- induced changes on chlorophyll metabolism and antioxidative system in maize leaves” under Dr. Meeta Jain. Grant- 3.90 Lakhs (2010-2013).</p>
10.	Patents generated if any	None

11.	New collaborative research program	<ul style="list-style-type: none"> <li>• The Faculty members have research collaborations with Scientists of other Institutes.</li> </ul> <p><b>Dr. D. Bhatnagar</b> is working in collaboration with</p> <ol style="list-style-type: none"> <li>1. Dr. Poonam Rana, Scientist D, INMAS, DRDO, New Delhi.</li> </ol> <p><b>Dr. R. Gadre</b> is working in collaboration with</p> <ol style="list-style-type: none"> <li>1. Dr. Vineet Kumar, Senior Scientist , NRCS, Indore</li> <li>2. Dr. (Mrs.) Sane, Scientist D, NBRI, Lucknow</li> </ol> <p><b>Dr. S.M. Gokhale</b> is working in collaboration with</p> <ol style="list-style-type: none"> <li>1. Dr. Surekha Zingade, Dy Director, ACTREC, Mumbai.</li> <li>2. Dr. Vineet Kumar, Senior Scientist, NRCS, Indore</li> <li>3. Dr. Sribash Roy, Senior Scientist, NBRI, Lucknow.</li> </ol> <p><b>Dr. Meeta Jain</b> is worked in collaboration with</p> <ol style="list-style-type: none"> <li>1. Dr. Sai Prasad, Senior Scientist, IARI Regional Station Indore.</li> <li>2. Dr. Anita Rani, Principal Scientist, NRCS, Indore.</li> <li>3. Dr. P.K. Singh, Senior Scientist, NBRI, Lucknow</li> </ol>
12.	Research grants received from various agencies	Rs 8.71 + Rs. 6.20 + Rs. 3.90 + Rs. 4.93 = 23.74 Lakhs
13.	Details of Research scholars	<p><b>Dr. Deepak Bhatnagar, Professor and Head</b></p> <ol style="list-style-type: none"> <li>1. Ms. Harsha Lad</li> <li>2. Ms. Deepti Bhatnagar</li> <li>3. Sh. Abhinav Kumar</li> <li>4. Ms. Ritu Tyagi</li> <li>5. Ms. Vartika Sinha</li> <li>6. Ms. Priyanka Mishra</li> </ol> <p><b>Dr. R. Gadre, Professor</b></p> <ol style="list-style-type: none"> <li>1. Ms. Sonal Dhamgaye</li> <li>2. Ms. Samatha Gunapati</li> <li>3. Ms. Radhika Chinchalkar</li> </ol> <p><b>Dr. SM Gokhale, Reader</b></p> <ol style="list-style-type: none"> <li>1. Ms. Savita Sharma</li> <li>2. Sh. Ankit Kelotra</li> <li>3. Ms. Antariksha Tyagi</li> <li>4. Ms. Reena Rawal</li> </ol> <p><b>Dr. Meeta Jain, Reader</b></p> <ol style="list-style-type: none"> <li>1. Ms. Swati Tiwari</li> <li>2. Sh. Jayesh Vaishnav</li> </ol>

		3. Ms. Seema Kelotra 4. Ms. Vaishali Mourya 5. Sh. Sharad Saurabh 6. Sh. Prakash Malviya
14.	Citation index of Faculty members and impact factor	<ul style="list-style-type: none"> <li>• Dr. D. Bhatnagar: Total citation is 903 since 2008. Range upto 247. Average Impact Factor is 2.5, H-index 15 since 2008, i10 index 20.</li> <li>• Dr. A.S. Yadav: Average Impact Factor: 3.0</li> <li>• For other faculty members Impact Factor was about 1.0</li> </ul>
15.	Honors/Awards to the faculty	None during the year
16.	Internal resources generated	Departmental Fees
17.	Details of departments getting SAP, FIST, etc assistance/recognition	None
18.	Community services	<ul style="list-style-type: none"> <li>• MPCST Coordinator Cell in the Department emphasizes on the promotion of Science in the community.</li> <li>• EPCO sponsored National Environment Awareness Campaign was regularly undertaken.</li> </ul>
19.	Teachers and officers newly recruited	One Contract Teacher recruited from August, 2013.
20.	Teaching-Non-teaching staff ratio	1:1.5
21.	Improvements in the library services	New Books with latest titles were added in the Departmental Library during the year 2011-12.
22.	New books/journals subscribed and their value	No new books were purchased during the year 2012-13.
23.	Courses in which Student Assessment of Teachers is introduced and the action taken on student feedback.	1) M.Sc. Biochemistry Course. 2) Ph.D. Biochemistry Course. 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.	65000/- including salary component 22000/- excluding salary component

25.	Computerization and Administration and the process of Admissions and examination, result issue of certificates.	To some extent
26.	Increase in the infrastructural facilities.	<ul style="list-style-type: none"> <li>• 2 New Labs, 1 Seminar hall and 1 Faculty room has been added in the present infrastructure.</li> <li>• Laboratories with cooling system, equipments, instruments such as Sorvall Ultracentrifuge and Spectrophotometer are present.</li> </ul>
27.	Technology up gradation.	<ul style="list-style-type: none"> <li>• Networking facility through IT center with one switch and eleven functional nodes, Computers and LCD projectors are available.</li> </ul>
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
30.	Activities and support from the Alumni Association.	None
31.	Activities and support from the parent Teacher Association.	None
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.	None
35.	Students achievements and awards.	<p>Two students qualified GATE.</p> <p>Awards for Essay and Quiz competition sponsored by MPCST were presented to the students.</p>

36.	Activities of the Guidance and Counseling Units.	Meeting with students and research scholars was held on 11.10.2013. The meeting was to encourage them in various scientific activities, and maintenance of logbooks and equipments.
37.	Placements services provided to student.	None
38.	Development programmes for Non- teaching staff.	None
39.	Healthy practices of the institution.	<ul style="list-style-type: none"> <li>• Regular and quality teaching.</li> <li>• Active participation in research activities.</li> <li>• Departmental harmony in working.</li> <li>• For quality assurance, self analysis and feedback from students is practiced.</li> <li>• Answer sheets are shown to the students after exams. The examiner report is obtained on the quality of question papers, course content etc.</li> </ul>
40.	Linkages developed with National/ International, Academic/Research bodies.	Research collaborations exist.
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.

## **Part C: Detail the plans of the institution for the next year: Yearly Plan for 2013-2014**

### **Curriculum**

The curriculum is designed to meet the applicability for various disciplines of biological sciences.

The syllabus was revised in May, 2013 to include recent advancements.

### **Strategies of teaching learning**

Mainly through lecturing aided by OHP and LCD.

### **Student feedback system design**

Student's feedback about department infrastructure, Faculty and course will be practiced as per IQAC.

### **Collection of feedback and its analysis; Format of analysis**

Feedback is collected at the end of semester from the students and analysed. The overall report considering various points will be prepared and necessary improvements will be done for the next year.

### **Improvement plan**

#### **Infrastructure**

Construction of Seminar hall, two Research Labs and 1 Faculty rooms has taken place in the year 2011-2012. There is no proposal for further construction in the year 2013-2014.

### **Research activities & promotion**

1. To strengthen research activities, new research projects will be submitted to various funding agencies.
2. Faculty participation in Seminars, Conferences and Workshops will be encouraged
3. Collaborative research activities will be promoted.

**Name & Signature of the**

**Coordinator QAC**



**Name & Signature of the**

**HEAD, UTD**

**Professor & Head**  
School of Biochemistry  
Devi Ahilya University  
Khandwa Road, Indore (M.P.)