Evaluative Report of the Department - A

1. Name of the Department : School of Life Sciences
2. Year of establishment : 1971
3. Is the Department part of a School/Faculty of the university? YES
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)
   (1) M.Sc.Life Sciences 2 Yrs PG. Course
   (2) M.Sc.Industrial Microbiology : 2 Yrs P.G. Course.
   (3) M.Phil in Life Sciences 1 Yr P.G.
   (4) Ph.D.Course work 6 Months duration.
   (5) Refresher course conducted by Life Sciences at Academic Staff College.
5. Interdisciplinary programmes and departments involved.
   School of Computer sciences, Biotechnology, Biostatistics.
6. Courses in collaboration with other universities, industries, foreign institutions, etc. Nil
7. Details of programmes discontinued, if any, with reasons. No
   Semester System in M.Sc. both courses.
9. Participation of the department in the courses offered by other departments Yes
10. Number of teaching posts sanctioned, filled and actual (Professors/Associate

<table>
<thead>
<tr>
<th></th>
<th>Sanctioned</th>
<th>Filled</th>
<th>Actual (including CAS &amp; MPS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>2</td>
<td>1</td>
<td>4</td>
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<tr>
<td>Reader</td>
<td>4</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Lecturer</td>
<td>4</td>
<td>4+3</td>
<td>3</td>
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<tr>
<td>Others: Contractual Teacher</td>
<td>--</td>
<td>1</td>
<td>1</td>
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</tbody>
</table>
11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

<table>
<thead>
<tr>
<th>S. N.</th>
<th>Name</th>
<th>Designation</th>
<th>Specialization</th>
<th>No. of Years of Experience</th>
<th>No. of Ph.D./M.Phil. student s guided for the last 4 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Dr. Suresh Chand</td>
<td>Professora r</td>
<td>Botany: Plant Biotechnology/ Tissue &amp; Cell culture/Genetics</td>
<td>32</td>
<td>05 Ph.D. + 01 M.Phil</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>Dr. K. N. Guru prasad</td>
<td>Professora r</td>
<td>Plant Physiology, Photobiology</td>
<td>37</td>
<td>06 Ph.D. + 01 M.Phil</td>
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<tr>
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<tr>
<td>03</td>
<td>Dr. Shridhar Patil</td>
<td>Professora r</td>
<td>Microbial Technology</td>
<td>34</td>
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<td></td>
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<tr>
<td>04</td>
<td>Dr. Anand Kar</td>
<td>Professora r</td>
<td>Animal Physiology, (Endocrinology)</td>
<td>27</td>
<td>03 Ph.D.</td>
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<td>Ph.D.</td>
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<tr>
<td>05</td>
<td>Dr. G. P. Pandy</td>
<td>Reader</td>
<td>Environmental Science, Eco-Physiology</td>
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<td>05 Ph.D. + 02 M.Phil</td>
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<tr>
<td></td>
<td>Ph.D.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>06</td>
<td>Dr. K. Hajela</td>
<td>Reader</td>
<td>Immunology, Biochemistry</td>
<td>24</td>
<td>03 Ph.D. + 01 M.Phil</td>
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<tr>
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<td>Ph.D.</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>07</td>
<td>Dr. Anjaja Jajoo</td>
<td>Reader</td>
<td>Plant Physiology, Biochemistry</td>
<td>14</td>
<td>10 Ph.D.</td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Name</td>
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<td>----------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td>08</td>
<td>Dr. T. Banerjee</td>
<td>Lecturer</td>
<td>Industrial Microbiology, Biotechnology</td>
<td>8.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dr. T. Banerjee Ph.D.</td>
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<td></td>
<td>Ph.D.= NIL</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M.Phil =01</td>
<td></td>
</tr>
<tr>
<td>09</td>
<td>Dr. Rameshwar Jatwa</td>
<td>Lecturer</td>
<td>Endocrinology, Pharmacology</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dr. Rameshwar Jatwa Ph.D.</td>
<td></td>
<td></td>
<td>Ph.D.= NIL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td>M.Phil =02</td>
<td></td>
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<tr>
<td>10</td>
<td>Sri Vinod Thakur</td>
<td>Lecturer</td>
<td>Environmental Biology</td>
<td>5</td>
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<tr>
<td></td>
<td>Sri Vinod Thakur M.Sc.</td>
<td></td>
<td></td>
<td>00</td>
<td></td>
</tr>
</tbody>
</table>

12. List of senior Visiting Fellows, Adjunct faculty, Emeritus Professors that visited the department (2012-2013)

(1) Prof. A. K. Tyagi, Director, National Institute of Plant Genomic Research, New Delhi. (25-26 February 2012; 17-20 March 2013)
(2) Prof. N. K. Singh, National Professor, ICAR & Dr. B. P. Pal Chair, IARI, New Delhi. (25-26 February 2012)
(3) Prof. Y. S. Ahlawat, Emeritus Professor, IARI, New Delhi. (25-26 February 2012)
(4) Prof. B. C Das, Director, Ambedkar Research Institute, New Delhi. (25-26 February 2012)
(5) Prof. Govindjee, US-Full Bright Fellow, Emeritus Professor, Albana University, USA.
(6) Prof. H.S. Gupta, Director, IARI, New Delhi. (January 2013)
(7) Prof. S.S. Sharma, Shimla University, H.P. (January 2013)
(8) Prof. R. K. Kohli, Vice Chancellor, DAU, Jalandhar. (17-20 March 2013)
(9) Prof. Paramjeet Khurana, University of Delhi South Campus, New Delhi. (17-20 March 2013)
(10) Prof. L. C. Rai, Banaras Hindu University, Varanasi. (17-20 March 2013)
(11) Prof. T.R. Sharma, IARI, New Delhi. (17-20 March 2013)
(12) Prof. Usha Vijay Raghwan, IISc, Bangalore. (17-20 March 2013)
(13) Prof. Pulok Mukherjee, Director, Natural Products Institutes, Kolkata. (17-20 March 2013)
(14) Prof. B. C. Tripathi, Vice Chancellor, Ravenshaw University, Cuttack. (April 2013)
(15) Dr. Pankaj Srivastava, I.F.S. Chief Commissioner of Forest, Indore. (22 May 2013)
(16) Dr. Afroz Ahmad, Ministry of Water Resource, Govt. of India, New Delhi. (22 May 2013)

13. Percentage of classes taken by temporary faculty – programme-wise information

0.5 % (Computer Application & Bio-informatics).
   Total number of faculty = 10
   Details of Students enrollment:
   M.Sc I & III sem Life Sciences = 19+18 = 37
   M.Sc I & III sem Industrial Microbiology = 15+15 = 30
   M.Phil (2012-13) = 18
   Ph.D Course work Students (2012-13) = 36

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual
   Lab Technician 03 : Sr.Technician 02 : LDC 01;
   Class IV 01[peon] ; Lab attendend 03; Gardner 06

16. Research thrust areas as recognized by major funding agencies:
   Plant biotechnology, Tissue culture, Plant and Animal Physiology, Immunology, Industrial Microbiology, Environmental Biology.

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.
   1. **Dr. Suresh Chand**:
      *In Vitro* propogation techniques for the propogation of pongarnia pinnata; A potential source for biofuel. (Sanctioned by UGC). (Rs. 12.50 lakhs)

2. **Dr. K.N. Guruprasad**:
   1. Title of project," Physiological and biochemical effect of Strobilurin Fungicide F-500 on Soybean" Sponsored by BASF India Pvt. Ltd.
   2. Regulation of carbon metabolism by ambient UV-B and UV-A radiations in C₃ and C₄ plants.”

3. **Dr. K.Hajela**:
   UGC- Evaluation of predictive prognostic value of mannose binding serum levels and exon and promoter polymorphism in association with known biological markers of ischemic stroke.(Rs. 7.45 lakhs; 2012-2015)

4. **Dr. Anjana Jajoo**:

5. **Dr. Rameshwar Jatwa**:
   1. Isolation and purification as well as efficacy evaluation of some novel dipeptidyl peptidase inhibitors _IV (DPP-IV) as therapeautic molecules for type 2 diabetes mellitus from plants sponsored by Madhya Pradesh Biotechnology Council, Bhopal (No.MPBTC/37 dated 18/01/2011 for 3 yrs. Amount Sanctioned Rs. 13.08 lakhs).
Evaluate SSR Report of School of Life Sciences


18. Inter-institutional collaborative projects and associated grants received

a) National collaboration
   1. Directorate of Soybean research Indore.
   2. Wheat Research Station, [IARI] Indore.
   3. BASF India PVT. Ltd
b) International collaboration: Indo-Russian joint project sponsored by DST.

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.
   Approx : 70 Lacs.

20. Research facility / centre with
   National recognition :
   a) Photobiology b) Photosynthesis c) Endocrinology d) Applied Microbiology
   e) Tissue culture f) Immunology g) Environmental Biology h) Toxicology.

21. Special research laboratories sponsored by / created by industry or corporate bodies : N.A.


Publications in 2009


Publications in 2010

Publications in 2011
45. József Dobó; Balázs Major; Katalin Kékesi; István Szabó; Márton Megyeri; Krishnan Hajela; Gábor Juhasz; Péter Zavodsky; Péter Gál (2011). Cleavage of Kininogen and Subsequent Bradykinin Release by the complement Component: Mannose-Binding Lectin-Associated Serine Protease (MASP)-1". PLoS one 6(5)e 20036. IF=4.35

Publications in 2012
66. Shine M.B., Guruprasad K.N. (2012) Impact of pre-sowing magnetic field exposure of seeds to stationary magnetic field on growth, reactive oxygen species and photosynthesis of maize under field conditions Acta Physiol Plant. 34, 255-265. IF=1.305

Publications in 2013:

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10

*Number of papers published (national / international)  
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<th>Book Chapter</th>
<th>National</th>
<th>International</th>
<th>Total</th>
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<td>2013</td>
<td>02</td>
<td>01</td>
<td>08</td>
<td>11</td>
</tr>
<tr>
<td>2012</td>
<td>03</td>
<td>02</td>
<td>17</td>
<td>22</td>
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<td>2011</td>
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<td>01</td>
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<td>2010</td>
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<tr>
<td>2009</td>
<td>03</td>
<td>05</td>
<td>16</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>07</td>
<td>10</td>
<td>78</td>
<td>96</td>
</tr>
</tbody>
</table>

*Monographs
Nil

Evaluate SSR Report of School of Life Sciences
11
*Chapters in Book:
   07
* Edited Books
   Nil
*Books with ISBN with details of publishers
   Nil
*Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)

*Citation Index – range / average
   Dr. Suresh Chand 473
   Dr. K.Hajela 396
   Dr. Anand Kar 394
   Dr.Anjana Jajoo 240
   Dr.Tushar Banerjee 56

*Impact Factor – range / average
   Dr. S.Chand 7.69 - 0.184
   Dr. K.N.Guruprasad 2.92 - 0.85
   Dr. S.Patil 3.59-1.81
   Dr.Anand Kar 3.59-1.14
   Dr.K.Hajela 5.4-1.83
   Dr.Anjana Jajoo 5.6-0.6
   Dr. G.P.Pandey 1.63-0.08]
   Dr.Tushar Banerjee 2.5-.3
   Dr.R. Jatwa 2.068-1.026

*h-index & i-index
   Dr.S.Chand- h-index= 14, i-index= 18
   Dr.K.Hajela- h-index= 11, i-index= 13
   Dr.Anand Kar- h-index= 14
   Dr.Anjana Jajoo- h-index= 9, i-index= 8
   Dr.Tushar Banerjee- h-index= 4

23. Details of patents and income generated : Nil


25. Faculty selected nationally / internationally to visit other laboratories / institutions industries in India and abroad

Dr. Suresh Chand:
- Awarded Commonwealth Academic Staff Fellowship by the Common-wealth Commision, UK.
- Awarded Govt. of India Biotechnology Overseas Associateship Award, Ministry of Sciences and Technology, DBT (IPK,Germany) 2004.
• Awarded Visiting Fellowship under International Collaboration Scientific Exchange Programme, INSA -DFG (Tuebingen, Germany) (2005)

Dr.K.N.Guruprasad:
• Visiting Scientist, Biophysics Department, Moscow University, Russia.

Dr.Anand Kar:
• Invited Plenary lecture In “International symposium on Constitutional Medicine” at Daizon, South Korea. (2009).

Dr.K.Hajela:
• Awarded Marie Curie International Incoming Fellowship (2007-2009).
• Awarded Hungarian Scholarship Board Visiting Fellowship 2010.

Dr. Anjana Jajoo:
• Awarded Hungarian State Scholarship from Hungarian State Board (HSB) to carry out research work in Hungary, (2009).
• Awarded DST-DAAD fellowship to visit Germany under Exchange of Senior Scientist to visit Germany to discuss collaborative projects. (2010).
• Delivered invited lectures in international conferences in Australia, Korea, Azerbaizan, Eurasia

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

Dr. Suresh Chand
- Editoria l Board Member-Indian Journal of Biotechnology (CSIR);
- Journal of Physiology and Molecular Biology of Plants (Springer Verlag),
- Review er of several International & National Journals
- Expert member-University Grants Commission (UGC)- IX,X,XI Plan
- □Exper t Member- UGC NAAC
- □Exper t Member-,UPSC  and  PSC of several states
- t Member- Selection Committees / Board of Studies/ RDC: in several Universities (Delhi, Udaipur, Jaipur, Kota, Allahabad, Lucknow, Gorakhpur, Indore, Meerut, Banasthali, IARI).

Dr. KN Guruprasad
• Member, Board of Studies in Botany, Vikram University, Ujjain.
• Member, Board of Studies in Botany, Jiwaji University, Gwalior.
• Member, Board of Studies in Botany, Goa University, Goa.

Evaluate SSR Report of School of Life Sciences
13
- Member, RDC in Botany, Vikram University, Ujjain.
- Member, RDC in Bioscience, Barkatulla University, Bhopal.
- Member, NAAC Assessment committee.

Dr. S Patil
- Member of Research Advisory Board, Shri Auribindo Institute of Medical Sciences, Indore.

Dr. A Kar
- Evaluator of DST project
- Invited member in editorial board of an international Journal

Dr. K Hajela
- Member, Project Approval Committee MP Biotech Council Bhopal
- Member, IMBIBE Award Committee MP Biotech Council Bhopal.

Dr. Anjana Jajoo
- Member, Board of Studies, North Saurashtra, Jalgaon.
- Member, UGC committee for credit transfer policy.

Dr. Rameshwar Jatwa
- Peer Reviewer of International Journals on Nanomedicines, Life Sciences, Vascular Health and risk Management, International Journal of Medicine and Medical Sciences

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

School of Life Sciences conduct refresher courses in the area of Life Sciences on various themes, almost every year. In the last two years Seminar on Recent Trends in Life Sciences (25-26th February 2012), Distinguished Scientist Lecture Series (19-20th March 2013), Seminar on Biodiversity (22nd May 2013) were held in the department.

28. Student projects

- Percentage of students who have done in-house projects including inter-departmental projects: As per the course curriculum M. Sc. Life Science and M. Sc. Industrial Microbiology students require to undertake project dissertation work in IV semester. The student of IV Sem batch pursue the projects from outside the department in national Lab / Institutes of repute. M. Phil Life Science students are doing in-house project in the department. (List of students & project titles, place where project work carried out is maintained in. (File A.9)
- percentage of students doing projects in collaboration with other universities industry / institute: 100 % of M.Sc. IV Life Sciences and Industrial Microbiology.

29. Awards / recognitions received at the national and international level by Faculty:
Dr. Suresh Chand
1. Member, NAAC peer team for accreditations to Universities and Colleges. (since 2011).
3. Member Expert Committee Board of studies, RDC, in various Universities.
4. Member Educational Board & Review committees of various Universities.
5. Selected as Post-Doctoral Fellow The Australian National University, Canberra, (1982).
6. Awarded Commonwealth Academic Staff Fellowship by the Commonwealth Commission, U.K.
8. Awarded Govt. of India Biotechnology Overseas Associateship Award of Ministry of Sciences and Technology, DBT (IPK, Germany) 2004.
10. Awarded Dr. R. B. Ekbote Prize by the Maharashtra Association for the Cultivation of Science, DST, Govt. of India. (2003).

Dr. K. N. Guruprasad
1. Member, NAAC peer team for accreditations of Universities and Colleges.
2. Visiting Scientist, Biophysics Department, Moscow University, Russia.
3. Consultant, BASF India Ltd, Mumbai.

Dr. Anand Kar
1. Awarded best science research award for teachers in Biological sciences, DAVV, Indore by M.P Council of Science and Technology (MPCST) (2010)

Dr. K. Hajela

Dr. Anjana Jajo
1. Awarded Hungarian State Scholarship from Hungarian State Board (HSB) to carry out research work in Hungary, (2009).
2. Awarded DST-DAAD fellowship to visit Germany under Exchange of Senior Scientist to visit Germany to discuss possibility of future collaborative projects. (2010).
3. Awarded best science research award for teachers in Biological sciences, DAVV by M.P Council of Science and Technology (MPCST), (2012).
5. Member, Board of Studies, North Saurashtra University, Jalgaon, Maharashtra
6. Member, UGC committee for credit transfer policy, UGC, New Delhi
7. Delivered invited lectures in international conferences in Australia, Korea, Azerbainjan, Eurasia.

Dr. Rameshwar Jatwa
UGC-Career Research Award (2012)

Students: Dr. Vivek Chandra, INSA Young Scientist Medal (2012). He did Ph.D. under Dr. K. Hajela, Reader, School of Life Sciences.

30. Seminars/Conferences/Workshops organized and the source of funding (national/international) with details of outstanding participants, if any.

<table>
<thead>
<tr>
<th>Year</th>
<th>National</th>
<th>Funding</th>
</tr>
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<tbody>
<tr>
<td>2009-10</td>
<td>Shanti Swaroop Bhatnagar Awardees’ conference, July 17-19, 2009</td>
<td>UGC/DST</td>
</tr>
<tr>
<td>2011-12</td>
<td>Recent Trends in Life Science, 25-26th Feb 2012</td>
<td>UGC</td>
</tr>
<tr>
<td>2012-13</td>
<td>(1) Refresher Course in Life Science, (Jan 2-22, 2013)</td>
<td>UGC</td>
</tr>
<tr>
<td></td>
<td>(2) Distinguished Scientists Lecture series, March 19-20, 2013</td>
<td>UGC/DST</td>
</tr>
<tr>
<td></td>
<td>(3) Popular Lectures on Biodiversity conservation (22nd May'2013)</td>
<td>DAVV</td>
</tr>
</tbody>
</table>

31. Code of ethics for research followed by the departments:

1. Various committees have been formed in the department to follow the research guidelines/ethics as prescribed by the UGC (File-SLS Committees).
2. Intellectual property rights of individual and institutions are taken care of.
3. Principles of ethics and social responsibilities are followed.

4. Student profile programme-wise: [2012-13 & 2013-14]

<table>
<thead>
<tr>
<th>Name of the Programme</th>
<th>Applications received</th>
<th>Selected</th>
<th>Pass percentage</th>
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<tbody>
<tr>
<td></td>
<td>(refer to question no. 4)</td>
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<td></td>
</tr>
<tr>
<td>M.Sc.-I Sem. Life Sciences2012</td>
<td>Admission through CET in 2012</td>
<td>Male: 14 Female: 06</td>
<td>Male: 70 Female: 30</td>
</tr>
<tr>
<td>Industrial Micro.2012</td>
<td></td>
<td>Male: 02 Female: 08</td>
<td>Male: 20 Female: 80</td>
</tr>
<tr>
<td>Life Sciences-I Sem.2013</td>
<td>90</td>
<td>Male: 06 Female: 14</td>
<td>Male: 30 Female: 70</td>
</tr>
<tr>
<td>Ind. Microbiology 2013</td>
<td>85</td>
<td>Male: 03 Female: 12</td>
<td>Male: 20 Female: 80</td>
</tr>
<tr>
<td>M.Phil [2012]</td>
<td>84</td>
<td>Male: 06 Female: 11</td>
<td>Male: 35 Female: 65</td>
</tr>
<tr>
<td>M.Phil [2013]</td>
<td>40</td>
<td>Male: 04 Female: 11</td>
<td>Male: 26.66 Female: 73.33</td>
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<tr>
<td>Ph.D. Course work[2012]</td>
<td>124</td>
<td>Male: 08 Female: 05</td>
<td>Male: 61.53 Female: 34.46</td>
</tr>
</tbody>
</table>
5. Diversity of students

<table>
<thead>
<tr>
<th>Name of the Programme (refer to question no. 4)</th>
<th>% of students from the same university</th>
<th>% of students from other universities within the State</th>
<th>% of students from universities outside the State</th>
<th>% of students from other countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.Sc. Life Science-2012</td>
<td>50%</td>
<td>15%</td>
<td>35%</td>
<td>Nil</td>
</tr>
<tr>
<td>M.Sc. Indust. Micro-2012</td>
<td>50%</td>
<td>30%</td>
<td>20%</td>
<td>Nil</td>
</tr>
<tr>
<td>M.Sc. Life Science-2013</td>
<td>66.67%</td>
<td>11.11%</td>
<td>22.22%</td>
<td>Nil</td>
</tr>
<tr>
<td>M.Sc. Indust. Micro-2013</td>
<td>100%</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>M.Phil -2012</td>
<td>84%</td>
<td>Nil</td>
<td>16%</td>
<td>Nil</td>
</tr>
<tr>
<td>M.Phil-2013</td>
<td>62.5%</td>
<td>37.5%</td>
<td>Nil</td>
<td>Nil</td>
</tr>
</tbody>
</table>

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

Civil Services and Defence Services: None

NET, GATE: List of the candidate kept in file (SLS-NET/GATE selected candidates).

35. Student progression
M.Sc. and Ph.D. Life Sciences

<table>
<thead>
<tr>
<th>Student progression</th>
<th>Percentage against enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>UG to PG</td>
<td>--</td>
</tr>
<tr>
<td>PG to M.Phil.</td>
<td>2</td>
</tr>
<tr>
<td>PG to Ph.D.</td>
<td>4</td>
</tr>
<tr>
<td>Ph.D. to Post-Doctoral</td>
<td>2</td>
</tr>
<tr>
<td>Employed</td>
<td></td>
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<tr>
<td>Campus selection</td>
<td></td>
</tr>
<tr>
<td>Other than campus recruitment</td>
<td>--</td>
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<tr>
<td>Entrepreneurs</td>
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</tr>
</tbody>
</table>

M.Sc. Industrial Microbiology

<table>
<thead>
<tr>
<th>Student progression</th>
<th>Percentage against enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
UG to PG | --
---|---
PG to M.Phil. | 2
PG to Ph.D. | 2
Ph.D. to Post-Doctoral | -
Employed
- Campus selection | -
- Other than campus recruitment | -
Entrepreneurs | -

36. Diversity of staff:

<table>
<thead>
<tr>
<th>Percentage of faculty who are graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>of the same university</td>
</tr>
<tr>
<td>from other universities within the State</td>
</tr>
<tr>
<td>universities from other States</td>
</tr>
<tr>
<td>From universities outside the country</td>
</tr>
</tbody>
</table>

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period: Ph.D. 01

38. Present details of departmental infrastructural facilities with regard to:
   a) Library: Yes
   b) Internet facilities for staff and students: Yes
   c) Total number of class rooms: 03
   d) Class rooms with ICT facility: Yes
   e) Students’ laboratories: 03
   f) Research laboratories: 10

39. List of doctoral, post-doctoral students and Research Associates
   a) from the host institution/university: 22
   b) from other institutions/universities: 10

40. Number of post graduate students getting financial assistance from the university: 23

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

Based on the requirement of students and as per U.G.C. guidelines.

42. Does the department obtain feedback from

(a) Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

The faculty is involved in the development of curriculum and teaching-learning-evaluation. The feedback obtained from the students on the curriculum is utilized to revise the syllabus. The suggestions/feedback analyzed by a committee constituted for the purpose after discussion discussed in the departmental committee. The curriculum is changed periodically according to the suggestions and need of the students. Teacher student meetings also conducted to resolve the problems as well as grievances.

(b) Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

The faculty is involved in the development of curriculum and teaching-learning-evaluation. The feedback obtained from the students on the curriculum is utilized to revise the syllabus. The suggestions/feedback analyzed by a committee constituted for the purpose after discussion discussed in the departmental committee. The curriculum is changed periodically according to the suggestions and need of the students. Teacher student meetings also conducted to resolve the problems as well as grievances.

(c) Alumni and employers on the programmes offered and how does the department utilize the feedback?

Department improves the program by incorporating the suggestions from feedbacks.

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

1. Dr. V. S. Bhatia, Principal Scientist, Directorate of Soybean Research, Indore.(1985)
2. Dr. Pradeep Kumar G, Scientist-G, RGCB, Trivandrum (Ph. D. 1988)
3. Dr. Malini Laloraya, Scientist F, RGCB, Trivandrum (M. Sc. 1986, Ph. D. 1990)
4. Dr. Mahendra Darokar, Scientist, CIMAP, Lucknow (M. Sc. 1991)
5. Dr. Alok Dubey, Scientist, RRCAT, Indore (Ph.D.1993).
6. Dr. D.V.S.S.R. Prakash, Director, PMI Institute, Bangalore.(1998)
7. Dr. Abhay Kumar Pandey, Scientist, NIPER, Mohali (Ph. D. 2000)
8. Dr. Ashok Kumar Seharawat, Senior Scientist, Edmanton, Canada.(Ph.D.2000)

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

3. Lecture on Photosynthesis delivered by Prof. Govindjee, Full Bright Fellow, Albana University, USA (2012).
5. Popular Lectures on Biodiversity conservation (22nd May’2013)

45. List the teaching methods adopted by the faculty for different programmes.
(a). Teaching of advanced topics in details by using International research paper, review articles, reviews, and online journals & literature provided to the students.

(b). To improve communication and research skills of the students, seminar presentations are incorporated in to the course curriculum of M.Sc., M.Phil and Ph.D. Course work students.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Record of Monitoring by the department ensure that programme objectives are constantly met and learning outcomes are monitored: The key objectives of our curriculum are to enhance the theoretical and practical understanding as well as skills of students in the area of basic and advance Life Sciences. School of Life Sciences is shaping the career of students in such a way that after the completion of their course they are absorbed in higher education, government and corporate sectors. School not only develops professional competencies, but also shapes the overall personality of students to become a responsible citizen of country.

47. Highlight the participation of students and faculty in extension activities.

The teachers and the students of the department participated in the tree plantation in the campus. A massive drive was carried out to remove the debris and polythenes from the premises. School of Life Sciences celebrated “International Day for Biological Diversity” on 22nd May 2013 and Dr. Pankaj Srivastava, IFS, Chief Conservator of Forests, Indore and Dr. Afroz Ahmad, Ministry of Water Resources, Govt. of India, New Delhi delivered lectures in the department.

48. Give details of “beyond syllabus scholarly activities” of the department.

(a). Participation in various conferences, seminars and lectures by faculty and students.

(b). Students counseling on the personal problems, lifestyle, career and to teach them to become good human being.

(c). Remedial and tutorial classes.

(d). Interaction with eminent scientists.

49. State whether the programme/ department is accredited/ graded by other agencies?

If yes, give details. Yes (UGC-SAP and DST-FIST)

UGC-SAP research fellows in the department:

a) Ms. Yamini Dixit (Ph. D. awarded in 2011)

b) Ms. Neha Sharma (from 16th March, 2009-Present)

c) Ms Teena Tongra (from 09th March, 2009-Present)

d) Ms Divya Agrawal (from 09th March, 2009-Present)

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

Since inception of the department, Ph.D. and PG students have been educated they are serving the nation in higher education and research. Department is making significant contribution in the the following areas: Plant tissue culture and somatic cell genetics;

Evaluate SSR Report of School of Life Sciences
Photosynthesis and Photobiology; Microbiology, Immunology; Animal Physiology etc.
Research facility in the following areas are available in the department.

1. Plant Tissue culture & somatic cell genetics- Somatic embryogenesis of medicinal, tree and cereal species. Synthetic seed technology.
2. Immunology and Biochemistry.
3. RIA facility for T3, T4, TSH estimations.
5. IRGA for plant physiology experiments.
6. Phytochemical analysis technology.
7. EPR for basic research.
8. Basic understanding of metabolic disorders.
10. Lab scale technology for Steroid bioconversion

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.
   Strength:
   a) International collaborations in the field of plant physiology and photobiology.
   b) Students placement (National and International)
   c) Renowned faculty who has published research papers in reputed journals.
   d) Involvement of faculty in various national funding agencies/ bodies like UGC, NAAC, CSIR, DST etc.
   e) One of our student Dr. Vivek Chandra was selected for INSA-Young scientist award.
Weakness:
   a) Collaborations with industry Pharmacy companies and ICAR/CSIR institutions.
   b) Need of supporting and administrative staff.
   c) Decreasing number of research students pursuing biological sciences due to reduced opportunities in the area of biological sciences.
   d) Recruitment policies of the government.
   e) Audit related problems in the utilization of research grants.

Opportunities:
   a) International and National collaborations will improve research standards and opportunities to students.
   b) Research skills and aptitude of faculties and students will further improve the quality of teaching and research.
   c) Sandwich research programme of various funding agencies will be beneficial to start consultancy services.
   d) Adjunct faculty positions will improve teaching.
   e) International fellowships for faculties will enhance the communication and research skills.

Challenges:
   a) To develop global level research labs.
   b) Attract students and researchers for Life Sciences courses, as at present there is lack of motivation for science among students.
   c) Lack of motivation for research and development activities.

52. Future plans of the department.
   a) Need of collaborations with other faculty within university (like medical, engineering, management etc.)
   b) New collaboration and exchange program for students and faculty.
   c) Consultancies with Pharma and biotech industries.
   d) Enhancement of ICT tools, virtual class rooms, 24x7 learning places and new student-centric teaching.
   e) Addition in permanent faculty, in recent areas like genomics, proteomics, molecular genetics, medical microbiology etc.
Write up of efforts for Quality Sustenance and Assurance in the department- B

School of Life Science is updating syllabi as per requirement of students and on the guidance of experts and as per UGC-CSIR NET Syllabi. The students are sent to summer training and project work in reputed national laboratories and institutions. Recently, PhD course work and M. Phil programme started in the department and faculty from School of Computer Sciences, IMS, School of Biotechnology are involved in teaching, inter-disciplinary courses.

The students feedback is obtained in each semester and the suggestions rendered by the students of M. Sc., M. Phil and research scholars are pass on to the individual teachers for improvement.

It is proposed from the 2013-14 session to introduce Bioinformatics, computer application, cancer biology paper in M.Sc. From the current academic session each and every student is attached with a faculty. The mentor will take care of the student on day to day basis. Induction programme was conducted in the department on 2nd August 2013. All the faculty, old and new students, research scholars were introduced by the Head of the Department. Guidelines were provided with regard to the requirement of attendance, syllabus, semester system, opportunities available to the students of biology in India and abroad. The scholarships provided by the state, central government to the students of SC, ST, OBC, Minorities were highlighted. From the current academic session, choice based credit system (CBCS) is being proposed.

Anti-ragging squad, Gender Sensitive Cell formed in the Department. The department is smoking free. The department conducts regular seminars involving students, research scholars and also invite distinguished scientists for the expert lectures. Multimedia and LCD facilities are used for classroom lectures/seminars. Results are declared timely. The grievances of the students, if any, are resolved by the board.

Student Enrichment Efforts (2012-13):

(1) Special lectures on “Fostering Excellence in Research” organized on January 15, 2013. List of Speakers is as follows:
(a) Prof. Priyankar Upadhyay UNESCO Chair Professor, Banaras Hindu University (BHU), Varanasi.
(b) Prof. V. K. Singh, Director, Indian Institute of Science Education and Research (IISER), Bhopal.
(c) Prof. H. Padh. Vice- Chancellor, Sardar Patel University, Vallabh Vidya Nagar, Gujarat.

(2) Workshop on Effective teaching and learning on May, 10, 2013.
(3) Lecture series on Mahamana Madan Mohan Malviya ji was held on 06/11/2012 and 11/12/2012 Dr. Karan Singh, Hon’ble Justice Shri Girdhar Malviya, and Mrs. Kanta Malviya were the speakers.
(4) Lecture on Swami Vivekanand’s Contribution and Message to youth was held on Jan. 12, 2013.
(5) Bharat Ratna Dr. A.P.J. Abdul Kalam’s message to students on June 12, 2013.
The department regularly conduct departmental committee and faculty meetings to discuss the academic matters.
Declaration by the Head of the Department - C

I certify that the data included in this Self-Study Report (SSR) are true to the best of my knowledge.

This SSR is prepared by the institution after internal discussions, and no part thereof has been outsourced.

I am aware that the Peer team will validate the information provided in this SSR during the peer team visit.

[Signature]

Signature of the Head of the institution

with seal:

[Seal]

Place: Indore
Date: 22/8/2013

School of Life Sciences
Devl Ahilya Vishwavidyalaya
INDORE (M.P.)