SHRI SHIVAJI COLLEGE OF ARTS, COMMERCE AND SCIENCE, AKOLA.

Departmental Profile

1. Name of the Department : BOTANY

2. Year of Establishment : UG - 1963
   : PG - 1992
   : Ph. D. - 2000

3. Details of Staff Members : 08

<table>
<thead>
<tr>
<th>Name of the faculty members</th>
<th>Educational Qualification</th>
<th>Designation</th>
<th>Experience (Yrs)</th>
<th>Specialization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Mr. D. G. Bhadange</td>
<td>M. Sc., M. Phil.</td>
<td>Dean, Faculty of Science, SGB, Amravati University &amp; Head of Department</td>
<td>26 10</td>
<td>Angiosperm Taxonomy</td>
</tr>
<tr>
<td>2 Dr. S. P. Rothe</td>
<td>M. Sc., Ph.D.</td>
<td>Associate Professor</td>
<td>25 27</td>
<td>Angiosperm Taxonomy</td>
</tr>
<tr>
<td>3 Dr. S. S. Suradkar</td>
<td>M. Sc., Ph.D.</td>
<td>Associate Professor</td>
<td>22 17</td>
<td>Plant Anatomy</td>
</tr>
<tr>
<td>4 Dr. Mrs. P. S. Kokate</td>
<td>M. Sc., Ph.D. (NET)</td>
<td>Associate Professor</td>
<td>20 10</td>
<td>Plant Physiology</td>
</tr>
<tr>
<td>5 Dr. D. K. Koche</td>
<td>M. Sc. Ph. D. (NET)</td>
<td>Assistant Professor</td>
<td>08 10</td>
<td>Cytology and Genetics</td>
</tr>
<tr>
<td>6 Dr. Mrs. V. S. Dandge</td>
<td>M. Sc., Ph.D.</td>
<td>Assistant Professor</td>
<td>05 07</td>
<td>Mycology</td>
</tr>
<tr>
<td>7 Mr. D. G. Mankar</td>
<td>M. Sc. B. Ed.</td>
<td>Lecturer, Jr. College</td>
<td>30 --</td>
<td>Cytogenetics</td>
</tr>
<tr>
<td>8 Mr. P. D. Borde</td>
<td>M. Sc. B. Ed.</td>
<td>Lecturer, Jr. College</td>
<td>25 --</td>
<td>Palaeontology</td>
</tr>
</tbody>
</table>

4. Details of Administrative/ Technical Staff:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Technical Staff</th>
<th>Qualification</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mr. Shaikh Ismail</td>
<td>B. Sc.</td>
<td>Lab. Assistant</td>
</tr>
<tr>
<td>2</td>
<td>Mr. S. G. Thorat</td>
<td>HSC, Diploma in gardening</td>
<td>Lab. Attendant</td>
</tr>
<tr>
<td>3</td>
<td>Mr. V. V. Nakat</td>
<td>SSC</td>
<td>Lab. Attendant</td>
</tr>
<tr>
<td>4</td>
<td>Mr. R. S. Ambhore</td>
<td>HSC</td>
<td>Lab. Attendant</td>
</tr>
<tr>
<td>5</td>
<td>Mr. V. B. Tayade</td>
<td>HSC</td>
<td>Lab. Attendant</td>
</tr>
<tr>
<td>6</td>
<td>Mr. Sandeep Shelke</td>
<td>SSC</td>
<td>On Daily Waighes</td>
</tr>
</tbody>
</table>

5. Students profile to programs:

<table>
<thead>
<tr>
<th>Course</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
<th>Demand ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Sc.</td>
<td>133</td>
<td>188</td>
<td>333</td>
<td>1:1</td>
</tr>
<tr>
<td>M. Sc.</td>
<td>06</td>
<td>23</td>
<td>29</td>
<td>1:1</td>
</tr>
<tr>
<td>Ph. D.</td>
<td>04</td>
<td>02</td>
<td>06</td>
<td>--</td>
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</tbody>
</table>

5. Success rate of each program. Its comparison with University results:
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>B.Sc.</td>
<td>78.2%</td>
<td>85%</td>
<td>84%</td>
<td>67%</td>
<td>73%</td>
</tr>
<tr>
<td>M.Sc.</td>
<td>100%</td>
<td>100%</td>
<td>81.2%</td>
<td>92%</td>
<td>75%</td>
</tr>
</tbody>
</table>

- The success rate of B.Sc. students opting Botany from this Department is quite high compared to the overall results of B.Sc. in SGB, Amravati University.
- The success rate of PG course in Botany as shown in the table above for the last five years is comparable to the University overall PG result in Botany.
- The dropout rate of PG is zero.

6. Number of faculty members on University Bodies / and other academic bodies and social organizations. Their role in curriculum designing and college development.

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>University Bodies/ Academic bodies/ Social organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. D. G. Bhadange</td>
<td>Dean, Faculty of Science, Chairman of BOS in Botany, Member, BUTR, BCUD, BOE, Academic council, RRC, CAP, Member of Maharashtra State Board of Secondary and Higher Secondary Education, Pune (MS)</td>
</tr>
<tr>
<td>Dr. S. P. Rothe</td>
<td>Honorary Taxonomist for Divisional forest and Social forestry, Akola and Washim District (MS)</td>
</tr>
<tr>
<td>Dr. Mrs. P. S. Kokate</td>
<td>District Coordinator for NSS and Member of University NSS advisory committee, SGB, Amravati University. Member of District Youth Affairs and sports advisory committee under Youth Affair and sports Ministry, Govt. of India.</td>
</tr>
</tbody>
</table>

The syllabus of the UG and PG courses are designed by SGB Amravati University, Amravati. The syllabus of UG was revised in 2005-06 and PG in 2007-08 with semester pattern being introduced for PG. Being The Dean of Science faculty and Chairman BOS in Botany, Mr. D. G. Bhadange have significant contribution in reframing the UG and PG syllabi. Being Plant Taxonomist, Dr. S. P. Rothe is engaged in Campus beautification, Plantation and plant identification. He is also involved in various activities of Shrusti Vaibhav Club, Akola. Dr. Mrs. P. S. Kokate is engaged in various extension activities under NSS, youth affairs, sports and cultural activities.

7. Learning resources of Department (Laboratories, Computers / Internet / Departmental library etc.)
- Computers / Internet - Three Systems with broadband connectivity and three faculty members have their own laptops.
- Departmental library with more than 350 Titles.
- LCD projector and OHP (Over head projector) for essential routine lecture as well as seminars.
- Botanical garden and Museum.

8. Enhancement of the resource during last five years.
- Internet facility for the teaching staff, research students and PG students.
- LCD projector for lectures and seminars.
- Research laboratory for Ph. D and M. Phil students.
- Tissue culture facility for routine practicals and research.
- Upgradation of Laboratories with equipments like extractor, Distillation, Blotting kits and Spectrophotometer etc.
• Botanical excursions are conducted every year to visit and observe the floristic biodiversity in various geoclimatic zones.
• Guest Lectures of specialist teachers in fields related to Biological sciences are arranged under the banner of Botanical Association.
• Modern teaching methods in use:
  • The most faculty members actively make use of audio visual aids to make the teaching effective.
  • Along with books the faculty members also make use of internet for upgradation of their teaching material.
  • With the modern audiovisual aids the faculty members also make use of models and charts in the process of teaching.
  • To make the teaching learning process more efficient the students are encouraged to deliver seminars and group discussion, quiz competitions etc.

9. Faculty members participated in National and International Conferences / workshops / seminars etc.

<table>
<thead>
<tr>
<th>Name of Teachers</th>
<th>Conference/ Seminars/ Symposia/ Workshop attended / Participated</th>
</tr>
</thead>
</table>
| Prof. D. G. Bhadange | 1) XVI annual conference of IAAT, organized by Agarkar Research Institute Pune, Oct. 4-6, 2006  
  2) Lady Teachers Association of Amaravati University, Organized by Shri Shivaji College, Akola, 3rd Jan. 2007  
  3) “Emerging trends in Medicinal plants & their biotechnological advances” Organized by Dr. Ambedkar College, Nagpur, Jan. 5-6, 2007.  
  7) National seminar on recent trends in Botany organized by Dept. of Botany, M. F. College, Warud (24th Jan 2009) |
| Dr. S. P. Rothe | XXIX All India botanical conference, organized by Department of Botany, Mohanlal Sukhadia University, Udaypur, Oct. 9-11, 2006.  
  2) Emerging trends in Medicinal plants & their biotechnological advances” Organized by Dr. Ambedkar College, Nagpur, Jan. 5-6, 2007  
  3) Lady Teachers Association of Amaravati University, Organized by Shri Shivaji College, Akola, 3rd Jan. 2007  
  6) National seminar on recent trends in Botany organized by Dept. of Botany, BAMU University (2008) |
| Dr. S. S. Suradkar | 1) XXIX All India botanical conference, organized by Department of Botany, Mohanlal Sukhadia University, Udaypur, Oct. 9-11, 2006  
  2) Lady Teachers Association of Amaravati University, Organized by Shri |
2) Lady Teachers Association of Amaravati University, Organized by Shri Shivaji College, Akola, 3rd Jan. 2007  
4) National seminar on Biophysics, organized by JD Patil college, Daryapur, 19 Feb. 2007  
6) National seminar on Recent Innovations in Herbal drugs, organized by Dept. of Botany, M. F. College, Warud (24th Jan 2009)  
7) Capacity building of women managers in higher education, Shri Shivaji College, Amravati (27-31 Oct. 2009) |
3) XXIX All India botanical conference, organized by Department of Botany, Mohanlal Sukhadia University, Udaypur, Oct. 9-11, 2006 and presented paper entitled as “In vitro induction of latent potential defense genes in three CLS susceptible -----Adathoda zylanica leaf extract”.
4) Lady Teachers Association of Amaravati University, Organized by Shri Shivaji College, Akola, 3rd Jan. 2007  
6) State level conference on Environment, organized Jointly by Shri Shivaji College Akola and TREE, 4th Feb. 2007  
7) National seminar on Recent Innovations in Herbal drugs, organized by Dept. of Botany, M. F. College, Warud (24th Jan 2009)  
8) A national Seminar on Recent trends in teaching basic and applied sciences organized by Phulsingh Naik College Pusad (3rd Jan 2009)  
9) Short term training program on Genetic engineering organized By PGTD of Biotechnology, SGB, Amravati University, Amravati (15- 21th Feb. 2009). |
| Dr. Miss. | 1) One day conference of Lady Teachers Association of Amaravati |
10. Conferences/ workshops/ seminars/ symposia organized by the Department.

- The Department had organized a National conference on Ethnobotany, Biodiversity and conservation. 18th to 19 Jan. 2003.
- The Department has organized an intercollegiate Seminar completion for B. Sc. III students. 10th January 2008.
- **Evaluation methods:**
  - To evaluate the student’s performance, regular unit tests and annual test examination (both in theory and practicals) are conducted.
  - Quiz, Seminars and group discussions are encouraged to evaluate student’s interest in academic as well as extracurricular activities.
  - The staff members also use to evaluate the students on the basis of their behavior in the classroom as well as college premises.

11. Participation of teachers in academic activities other than teaching and research:

- All the members of departmental faculty has active participation in various co-curricular and extra curricular activities of the college. They have worked as member of several committees for organizing conferences, seminars, youth festival, sports meet and other cultural activities.
- Mr. D. G. Bhadange is Dean, of the science faculty, SGB Amravati University and also the Chairman of Board of studies in Botany and RRC. He is member of several other important committees like Academic council, SENATE, BUTR, BOE & CAP, Special Exam committee. He is also the member of Maharashtra State Board of Secondary and Higher secondary Education, Pune (MS).
- Mr. D. G. Bhaange had chaired several functions including inauguration and Prize distribution ceremony of National Conferences, Seminars, workshops and symposium etc. at various institutes of the region.
- Dr. S. P. Rothe is honorary taxonomist for social forestry department of Akola and Washim District. He has also delivered several subject related speeches at various workshops.
- Dr. P. S. Kokate is working as the District co-ordinator of NSS for Amravati University, also as member of NSS advisory committee to the Vice- Chancellor of SGB, Amravati University, Amravati.
- All other staff members are working as members of various committees of SGB, Amravati University, Amravati for paper setting, valuation, moderation and practical examination.
- Dr. S. P. Rothe and Dr. S. S. Suradkar are the Paper setters and Ph. D. referees at other Universities.
Research activities:
M. Phil Dissertations : 08
Ph. D. Students : Awarded: 02
- Mr. M. B. Bobade
- Mrs. P. S. Kokate
Registered: 06
- Mr. P. N. Pawade
- Miss. Sanchayika Sarode
- Mr. Nafees Iqbal
- Mr. Syed Imran
- Miss. Rupali Shirsat
- Mr. Mohnish Bokhad
Recognized Guides : 02
: Dr. S. P. Rothe
: Dr. S. S. Suradkar

12. Research papers published:
- Preliminary observations on vegetation of Beed District. Eco. Env. & Cons. 3(3-4) : 183-187 (2001)
- Antimicrobial activity of Argemone mexicana L. Bioinfoletes 3(3) 188 (2006)

Papers presented in conferences:

<table>
<thead>
<tr>
<th>Name of Teacher</th>
<th>Presented in</th>
<th>Title of the paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. S. S. Suradkar</td>
<td>State level Seminar on Recent research trends in Botany. Late PR Ghogre college, Dhule (21/03/1988)</td>
<td>Anatomy in relation to taxonomy (sapibdaceae &amp; anacardiaceae)</td>
</tr>
<tr>
<td>Dr. S. S. Suradkar</td>
<td>Silver Jubilee conference of IBS, MJP Rohilkhand University Bareilly (27-29/10/2002)</td>
<td>Taxonomic significance of S. anacardium</td>
</tr>
<tr>
<td>Dr. P. S. Kokate</td>
<td>International conference on plant science with special reference to biodiversity &amp; Conservation;</td>
<td>--</td>
</tr>
<tr>
<td>Name</td>
<td>Project title</td>
<td>Major/ Minor</td>
</tr>
<tr>
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<td>------------------------------------------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Dr. S. P. Rothe</td>
<td>Changing pattern of Biodiversity in Akola District</td>
<td>Minor</td>
</tr>
<tr>
<td>Dr. S. S. Suradkar</td>
<td>Anatomical investigation in some Sapindales</td>
<td>Minor</td>
</tr>
<tr>
<td>Dr. D. K. Koche</td>
<td>Immunostimulent activity of some plant derived elicitors in Vigna radiata</td>
<td>Minor</td>
</tr>
<tr>
<td>Dr. D. K. Koche</td>
<td>Preliminary phytocochemistry and antimicrobial activity of some lamiaceae members</td>
<td>Minor</td>
</tr>
</tbody>
</table>

Research Projects Ongoing : 05

<table>
<thead>
<tr>
<th>Name of teacher</th>
<th>Project title</th>
<th>Major/ Minor</th>
<th>Funding agency</th>
<th>Sanction amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. S. P. Rothe</td>
<td>Digitalized inventory of medicinal plants (Akola and Washim District)</td>
<td>Major</td>
<td>RGSTC</td>
<td>17,00000/-</td>
</tr>
<tr>
<td>Dr. D. K. Koche (PI) Mr. D. G. Bhadange (Co-</td>
<td>Search for bioactive phytochemicals and in vitro regeneration studies of some lamiaceae members having ethnomedicinal values</td>
<td>Major</td>
<td>UGC</td>
<td>11.08300/-</td>
</tr>
</tbody>
</table>
Books published by the staff members:
Dr. S. P. Rothe (Co-author)
- Flora of Marathwada (Amrut Prakashan, A’bad MS.)
- Aquaculture in Botany
- Medicinal plants of India

13. Participation of the staff in extension activities:
- Dr. S. P. Rothe delivered a speech to farmers on medicinal plant cultivation and their marketing in Feb. 2009.
- Dr. S. P. Rothe is currently working as honorary taxonomist to the social forestry division of Akola and Washim District and also give the information on various aspects of plant to the trainees of forest department.
- Dr. P. S. Kokate is the coordinator for NSS to the SGB University, Amravati and visited several NSS camps of various colleges in different villages. He also extend the knowledge of medicinal plants and other aspects related to the subject.
- Prof. D. G. Bhadange, being The Dean, faculty of science, is honorable invitee in various institutes to deliver the lecture on various subject related topics. He has currently visited the UK and collected the information on pitcher plants and use to deliver the same information in various relevant occasions.
- Along with plantation and campus beautification, the UG students are also engaged in other subject extensions like. Some students collected the information of medicinal plants and explain to the secondary and higher secondary students of various schools and junior colleges in the city.
- All faculty members actively guide the students of various secondary and higher secondary education institutes in the city for the projects.

14. Achievement of students during last five years:
- Mr. Umesh Raut and Mr. Nilesh Takur B. Sc. III students Presented their poster in university level intercollegiate poster competition organized by Shri Shivaji College, Akot; and awarded with 1st Prize. (January 2006)
- Mr. Syed Imran (M. Sc. II) Presented a paper in the National conference on Modern approaches & innovations in Biotech & Biodiversity conservation organized by Shri Shivaji Science College, Amravati (28-30 Jan 2007)
• Mr. D. A. Tiwane and Mr. S. S. Sharma (M. Sc. II) Presented a poster in the national seminar held at Dept. of Botany, LAD college Nagpur and awarded 3rd prize for their presentation (2008).

15. Achievement of staff members during last five years:
• Dr. D. K. Koche, Awarded under young scientist category for his presentation in ICPSBC-05, Organized by Department of Botany, Amravati University, Amravati (17-20 Jan 2005).
• Dr. S. P. Rothe awarded for his best paper presentation in National seminar organized by Dept. of Botany, BAMU, A’bad (MS). (2008).
• Mr. D. G. Bhasange, Head of the Department is working as Dean of Science faculty, SGB, Amravati University, Amravati Since Dec. 2009.
• Dr. P. S. Kokate is appointed as District Coordinator of NSS for Akola District by the SGB, Amravati University. She is also working as member of District Youth Affairs and Sports Committee, Akola District.
• Each faculty member of the department is working on MRP sponsored by UGC.
• Department has completed 04 Minor research projects during 2005-2009.
• Currently 04 Minor Research Projects and 02 Major research projects are ongoing in the Department.
• The faculty members of the Department have more than 40 research papers to their credit.

16. Plan of action for next five years:
• To improve the results of UG classes.
• To improve the instrumentation facility for UG, PG and Research.
• To improve the Library facility inclusive of online reference work.
• To improve the laboratory infrastructure and sophistications.
• To improve the Laboratory facilities to practicize, phytochemistry, molecular biology, tissue culture, fungal culture, taxonomy and Biodiversity.

17. Important alumni of the Department:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Alumni</th>
<th>Present post</th>
<th>Last pass from the Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mr. ShivkumaR Tale</td>
<td>Sr. Lecturer in Geology</td>
<td>B. Sc.</td>
</tr>
<tr>
<td>2</td>
<td>Mr. Sanjay S. Deshmukh</td>
<td>Field Officer, Apex chemicals.</td>
<td>B. Sc.</td>
</tr>
<tr>
<td>7</td>
<td>Mr. Ananta Vaishanv</td>
<td>Jr. Lecturer, Bharat High school &amp; Jr. College, Akola</td>
<td>M. Sc.</td>
</tr>
<tr>
<td>8</td>
<td>Mr. Shaikh Wasim</td>
<td>Jr. Lecturer, Z. A. College Malkapur</td>
<td>M. Sc.</td>
</tr>
<tr>
<td>9</td>
<td>Mr. Shrikrushna Gawande</td>
<td>Teacher, At High school, Kutasa.</td>
<td>M. Sc.</td>
</tr>
<tr>
<td>10</td>
<td>Mr. A. V. Padghan</td>
<td>Sr. Lecturer, at GS Science college, Khamgaon</td>
<td>B. Sc.</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Position and Details</td>
<td>Qualification</td>
</tr>
<tr>
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</tr>
<tr>
<td>14</td>
<td>Ku. Poonam Kalantri</td>
<td>Teacher, in Residensial school, Khamgaon</td>
<td>M. Sc.</td>
</tr>
<tr>
<td>15</td>
<td>Ku. Smita Thote</td>
<td>Project Officer, Dharni</td>
<td>B. Sc.</td>
</tr>
<tr>
<td>16</td>
<td>Ku. Kanchan Thorat</td>
<td>Lecturer, Science college, Balapur</td>
<td>M. Sc.</td>
</tr>
<tr>
<td>18</td>
<td>Dr. S. K. Bhagat</td>
<td>Reader, in Chemistry, Shri Shivaji College, Akola</td>
<td>B. Sc.</td>
</tr>
</tbody>
</table>

18. Any other highlights:
   • The Department is 45 years old and still running successfully.
   • The sufficient infrastructure, separate, UG, PG and Research labs and qualified teachers make prominent features of this Department.
   • The Departmental faculty actively engaged in the research and completed 04 minor research projects, published over 20 research papers (Since 2004) and 04 minor and 02 Major research projects are in progress.
   • Mr. D. G. Bhadange, is working as Dean, faculty of Science, SGB, Amravati University, Amravati.
   • Dr. Ms. P. S. Kokate is appointed as the NSS coordinator of Akola District and member of NSS advisory to Vice chancellor of SGB, Amravati University.
   • The Department has comparatively good academic record with active participation of students in University, State level & National seminars and conferences.