



Fergusson College (Autonomous) Pune

Report of Academic Audit -2016-19

Dates: 11th and 12th November, 2019

Experts:

1. Dr. Vinayak Shirgurkar, Former, Principal, Parvatibai Chowgule College of Arts and Science (Autonomous) Madgaon, Goa.
2. Prof. Saroj Ghaskadbi, Professor, Department of Zoology, Savitribai Phule Pune University, Pune
3. Dr. Hrishikesh Soman, Principal, Symbiosis College of Arts and Commerce (Autonomous) Pune

Schedule

Sr.No.	Department	Date	Time	Venue
Faculty of Science				
1	Mathematics	11/11/2019	10.00am	Department of Mathematics
2	Electronic science	11/11/2019	10.30am	Department of Electronic Science
3	Geology	11/11/2019	11.00am	Department of Geology
4	Physics	11/11/2019	11.30am	Department of Physics
5	Statistics	11/11/2019	12.00pm	Department of Statistics
6	Chemistry	11/11/2019	12.30pm	Department of Chemistry
7	Botany	11/11/2019	1.00pm	Department of Botany
8	Zoology	11/11/2019	1.30pm	Department of Zoology
Lunch Break				
9	Biotechnology	11/11/2019	2.30pm	Department of Biotechnology
10	Environmental Science	11/11/2019	3.00pm	Department of Environmental Science
11	Microbiology	11/11/2019	3.30pm	Department of Microbiology
12	Computer Science	11/11/2019	4.00pm	Department of Computer Science.
13	Animation	11/11/2019	4.30pm	Department of Animation and
14	B.VoC	11/11/2019	5.00pm	B.Voc
	IQAC	12/11/2019	10.00am	IQAC Office
Faculty of Arts				
1	Economics	12/11/2019	10.30am	AV Hall
2	English	12/11/2019	11.00am	AV Hall
3	French	12/11/2019	11.30am	AV Hall
4	Geography	12/11/2019	12.00pm	AV Hall
5	German	12/11/2019	12.30pm	AV Hall
6	Hindi	12/11/2019	1.00pm	AV Hall
7	History	12/11/2019	1.30pm	AV Hall
Lunch Break				
8	Marathi	12/11/2019	2.30pm	AV Hall
9	Philosophy	12/11/2019	3.00pm	AV Hall
10	Political Science	12/11/2019	3.30pm	AV Hall
11	Sociology	12/11/2019	4.00pm	AV Hall
12	Sanskrit	12/11/2019	4.30pm	AV Hall
13	Psychology	12/11/2019	5.00pm	Department of Psychology
Review of Academic Audit at IQAC Office				

1. Department of Mathematics

- i. Curriculum objectives are too vague and need to be specific.
- ii. Need to specify the number of hours for bridge courses conducted and the contents of course.
- iii. Need to build a mechanism to gather data related to student progression (on college level)
- iv. Need to increase publications and consultancy.

2. Department of Statistics

- i. Need to mention overall passing percentage in Students' results
- ii. lacking in research, consultancy and placement data.
- iii. Mapping of evaluation methods to match learning outcomes.

3. Department of Geology

- i. The learning outcomes should focus on skills.
- ii. Geology has museum which needs branding.
- iii. The department provides consultancy services, the list of completed projects/ information should be uploaded on college website.

4. Department of Electronic Science

- i. Should plan to set up an incubation centre
- ii. Should go for "Technology transfer"- from labs to companies
- iii. Can have Internships for teachers
- iv. Can work on Patents of concepts
- v. Need to work on developing e-content and the department has participated in UGC-e-PG Pathshala programme earlier.
- vi. Can convert the collaboration with Kshiti Cleantech into consultancy.
- vii. Try to increase collaborations for International Exchange Programs

5. Department of Physics

- i. Document regular departmental meetings specifically those where the curriculum has been discussed.
- ii. The department should enter into formal collaborations with National Institutes.
- iii. As the department has regular alumni interactions, there should be formal structure for this interaction.
- iv. The department has vocational programme in photography and many of the students have become entrepreneurs, but there is no documentation regarding departmental help provided to the students for establishing them as entrepreneurs. this aspect should be well documented. communication with student entrepreneurs may be in the form of form of e-mail as well as this can be supportive evidence.

6. Department of Chemistry

- i. If teaching is done based on flip classroom then few points needs to be considered.
- i. Has teacher himself herself undergone intensive training for “flip-class room” technique
- ii. Out of 48 lectures, what should be the proportion of Teaching regular vs teaching using flip classroom. Define it clearly.
- iii. Maintain evidence of these sessions in the form of videos.
- iv. Placement numbers were very low. Suggestions was to verify syllabus and find relevance for sustainability and jobs.
- v. Chemistry is relatively big department. They have set of approved teachers. So recommendation is at least approved teachers should have projects working under different schemes.
- vi. Student Progression from UG to PG is approximately 40%. No account of remaining 60%. PG to higher , data is unavailable.
- vii. On publication front, published paper count is too less.
- viii. Lupin award prize money given to students should be tweaked to show as endowment.
- ix. The department can collaborate with industries and start consultancy services.

7. Department of Botany

- i. Department of Botany has two courses B.Sc and M.Sc and has around eleven faculty members. Most of them have approval form University.
- ii. While teaching programme is doing well there is not much output on research front. Quality of publications needs serious improvement.

8. Department of Zoology

- i. Department of Zoology has only one course of B. Sc in Zoology. They should start a postgraduate course in Zoology.
- ii. To gain a recognition for the Department in my opinion they should float M.Sc course with some specialization.
- iii. There are no research projects and there is lack of good quality publications which needs immediate attention.

9. Department of Biotechnology

- i. Department of Biotechnology has two Programmes namely B.Sc and M.Sc in Biotechnology with intake of 45 and 24 respectively.
- ii. There are eleven faculty members with varied specializations required to teach interdisciplinary subject like Biotechnology of which only two are permanent and have University approval.
- iii. Most of the faculty members are PhD and interested in doing research. They have made significant changes to the syllabus, have adopted different ways of evaluation which has improved their teaching programme.
- iv. They also have developed good contacts with industry which has helped placement of their students. Some of the faculty members are also engaged in research and have published good papers.
- v. However, they should make more efforts to improve research output. One of the limiting factors is not having University approval which prevents faculty member from applying to the Govt. agencies for funding.
- vi. Regarding teaching programme I strongly feel that they should start integrated M.Sc. Biotechnology programme or if possible four year graduation programme in Biotechnology. This will allow them to retain their own students who are well trained and will help increase academic output.

10. Department of Environmental Science

- i. Department of Environmental Science has B.Sc and M.Sc in Environmental Sciences with intake of 40 and 24 respectively. There are six faculty members and all have approval from University.
- ii. Together they have some research publications, however they are not necessarily in Scopus or Web of science indexed journal.
- iii. Department can help college by doing environment audit and giving recommendations for campus upkeep.
- iv. They have made an attempt to create biodiversity registry of the campus however it needs to be done following appropriate research methodology.

11. Department of Microbiology

- i. Department of Microbiology also has two academic programmes namely B.Sc and M.Sc with intake of 80 and 24 students respectively. There are ten faculty members of which four have approval from University.
- ii. They are doing well on teaching front which is reflected in their students performance and placement.
- iii. They also have good contacts with the industry which helps in student placement. Some faculty members have few research publications.

12. Department of Computer Science

- i. Department should facilitate consultancy. Project work should be increased which can be corporate project or UGC projects or it can be research projects.
- ii. Placement data = in campus + off campus
- iii. Maintain record of entrepreneurs i.e. anyone starting their own setup
- iv. Research paper count has to be increased.

13. Department of Animation

- i. Work produced by students of this course was well appreciated. Currently eligibility for B.Sc Animation course is restricted to Science stream students.
- ii. Considering its a creative field, students from any background including Arts and Commerce should be allowed to apply for this course.

- iii. Though department has its own library, number of books in central library are less. Count should be increased.
- iv. In campus placement numbers were very low.
- v. Many of the students choose to be a freelancer after the completion of the course. Their data should also be considered for showing against placements.
- vi. placements data can be (in campus + off campus + freelancer).
- vii. Since Animation is very in-demand profession, If needed revise syllabus and get updated. Strong suggestion was to focus on placements and job employability.

14. Department of B.Voc

- i. For both B.Voc courses (Digital Art and communication and Mass Communication), work produced by students was appreciated.
- ii. Reference books in the library needs to be increased
- iii. Prepare future plan for next 5 yrs
- iv. Define program outcome and course outcome
- v. More industry experts should be invited.
- vi. These courses being in demand and considering the competition within city, do more marketing to attract talented students. Focus on highlighting what is FC course offers which is distinct from others.

15. Department of Political Science

- i. Lack of publications.
- ii. The department shouldn't be taking credit for the Women and Development Course as it is not run by them.
- iii. Demystifying of Competitive examinations such as UPSC should be done.
- iv. Can think of collaborating with US consulate for the course on American studies.

16. Department of Marathi

- i. The department needs to have publications in listed journals.
- ii. Best practices should be only those that are unique to the department and regularly followed.
- iii. Innovative methods such as students designing the syllabus for one of the semesters may be introduced.

17. Department of French

- i. The department may start a short course on France and French language for professionals visiting France
- ii. A translation centre can be established where all language departments can collaborate to give students an experience of translation related work.
- iii. Lack of research and publications in the department
- iv. Department should design Corporate Training courses in French language.

18. Department of Economics

- i. Terminology used for faculty members should be changed (use Ad Hoc instead of consolidated, CHB instead of visiting)
- ii. Interdisciplinary components can be included in the syllabus such as a unit on Political Economy.
- iii. Department has potential for consultancy/ corporate training which needs to be further explored.

19. Department of English

- i. Need more collaborations with industry.
- ii. Can introduce courses on oral skills such as compering.

20. Department of Geography

- i. Can introduce add on courses on themes such as tourism.
- ii. Students must write and submit a report after every field visit to know the learning outcome.

21. Department of German

- i. Students going to Germany can be given appropriate credits.
- ii. Department should design Corporate Training courses in French language.

22. Department of History

- i. The syllabus currently seems to be focussed on Political History only, there can be a change in this format.
- ii. Newer topics such as history of industry, history of philosophy may be introduced.
- iii. Can develop a course on “Learnings from History” so as to develop a vision through the subject.

23. Department of Hindi

- i. More recent topics in Hindi can be brought in syllabus and the department should focus on skill development of students more rigorously.

23. Department of Philosophy

- i. Can have collaborations with institutes such as Vedashastrottejak Sanstha

24. Department of Psychology

- i. The department can devise diagnostic tests for entry level students.
- ii. The department needs to have at least one full time counsellor dedicated to the students of the college.
- iii. Maintain email correspondence with entrepreneur ex-students who have consulted the department for their start-ups.

25. Department of Sanskrit

- i. Revise syllabus in sync with the new education policy, that will help the department flourish in the near future.

26. Department of Sociology

- i. The department can involve students in Outreach activities so that students can gain experiential learning. The department can explore funding opportunities to undertake projects.

Recommendations

For Biological Sciences

1. Overall all these Departments are doing well in teaching but need to improve significantly on research front. Faculty members should write grants and get funding for research either from Government agencies or Industries. Most importantly research should only be published only in journals indexed in either Scopus or Web of Science.
2. Since all these departments use some biological material for their experimentation it is necessary that college forms following three committees and all research proposals are screened through appropriate committee prior to submission for funding. Even the practical involving biological material needs approval of these committees.
 - Institutional Ethical Committee (As per ICMR guidelines) for research involving human subjects.
 - Animal Ethics committee (As per guidelines of CPCSEA) for research involving animals.
 - Institutional Biosafety Committee (As per guidelines of DBT) for research involving biological material such as, microbes, DNA, RNA, Blood, Saliva etc.
 - For work involving field studies it is necessary to take permission from Biodiversity Board

Recommendations for all departments

1. Design a diagnostic test for all first year classes of both the faculties. The test could be a simple assessment to test basic knowledge of the student at entry level. it can be of 45 minutes duration.
2. Short bridge courses can be undertaken based on the diagnostic test for the slow learners.
3. At the same time, advanced learners can be provided with more challenging/ next level questions and tasks and maintain a proper document of this test.
4. Mapping of course outcomes and programme outcome with the type of questions/ assignments asked in the internal evaluation and end semester examination seems to be necessary. A department wise document of this aspect can be maintained at IQAC.
5. Videoclips of group discussions/ flip classrooms wherever practised needs to be undertaken on urgent basis.
6. Smart boards for all departments.
7. Every teacher should prepare and participate in developing e-contents which can be uploaded on UGC-SWAYAM. Department of Animation/ B.Voc and Computer Science can train teachers in this regard.
8. There is an urgent need for exploring possibilities and providing consultancy services and generate funds as some departments like French, German, Economics have good potential to provide corporate training which is taken as an immediate action.
9. At least 40 value-added courses should be started.
10. The College should also make concerted efforts in getting funding through CSR and enhance infrastructure.
11. Activities of NCC (extension) should focus on those mentioned in the NAAC guidelines.
12. College has few functional collaborations. This needs immediate attention and make efforts to establish collaborations especially where teacher and student exchanges can be mobilised.

13. The Placement Cell (CFC) conducts various activities in collaboration with Industry. There is no formal tie-up/ collaboration with industry, these type of linkages need to be formalized.
14. The Quality of publications needs enhancement and faculty should publish only in SCOPUS/ Web of Science Journals. The number of such publications should increase.
15. The faculty presently have just one/two patents, this number has to increase in coming years.
16. The college has Social outreach and Enabling Center (SOEC), through which students work as volunteers for different NGOs. There is need to have formal MoU with these NGOs.
17. Although the college has Certificate course in “IPR”, at least one workshop on IPR per department needs to be conducted.
18. Some departments have identified Best Practices, which can be institutionalised.

Recommendations for IQAC

1. The IQAC should undertake the task of mapping Learning Outcomes/ Course Outcome with type of questions asked in the end semester examination and relate it with number of students attempting the questions and number of students passing.
2. IQAC conducts SSS in addition to feedback on teaching and curriculum. Some more questions can be added to SSS.
3. The IQAC can send e-mail to students while implementing SSS and collect and analyse the data accordingly.
4. Orientation of CHB teachers should be undertaken as an immediate task by the IQAC.
5. Motivate research students to publish in SCOPUS/ Web of Science journals.
6. A part-time/full-time professional counsellor should be appointed in the Department of Psychology to take care of counselling students undergoing stress related issues.

7. International collaboration to be mobilized where teacher-student exchanges are possible.
8. The college provides seed money to teachers for presenting papers in conferences and participating in workshops, but the college should also provide seed to young teachers to undertake research projects, add new equipment in the laboratory through seed money.
9. IQAC can provide all procedural and practical support for enhancing linkages/ collaborations and corporate training.
10. A separate person needs to be appointed for Alumni related work.
11. The IQAC should also identify locational advantages and disadvantages of the college as per NAAC guidelines.

Dr. Vinayak Shirgurkar, Former Principal, Parvatibai Chowgule College (autonomous) Madgaon, Goa.	
Prof. Saroj Ghaskadbi, Professor, Department of Zoology, Savitribai Phule Pune University, Pune	
Dr. Hrishikesh Soman, Principal, Symbiosis College of Arts and Commerce (Autonomous) Pune	