

Review Report of IQAC (2016 to 2018)

Major Achievements of College:

- Awarded ‘College of Excellence’ by UGC
- All Science Departments supported under DBT STAR Scheme
- Awarded 19th Rank by NIRF.
- Awarded “STAR” Status by DBT
- Awarded Autonomous Status in June 2016
- Identified for “Public University” by RUSA, Maharashtra under the Scheme of Upgradation of autonomous colleges to University - June 2018

Quality Initiatives

- **Implementation of Autonomy**
 - a. Formation of Governing Body, Academic Council, Board of Studies for all subjects (26), Finance Committee and Board of Examination.
 - b. Designing of Curricula.
 - c. Choice based Credit System with Open electives at T. Y. B. Sc. and offering languages like German, French and Sanskrit for B. Sc. Students.
 - d. Flexible method of CIE (Concurrent Internal Evaluation).
- **Curriculum Development - Bench marking of Curricula**
 - a. Major Revisions in second / third year / PG syllabi
 - b. Self learning Course for PG
 - c. Skill component in undergraduate curricula
 - d. Curriculum Development workshops for all departments. These workshops were organized by the departments to prepare structure of third year syllabi. In this workshop, experts and academicians apart from those in Board of studies participated and gave their valuable inputs. These inputs were presented in Board of Studies meetings and then incorporated in the syllabi.
- **Teaching-Learning**
 - a. **Projects** for S. Y. and T. Y. B. A. courses with predefined parameters of assessment (100 M) -
 - b. Project based learning (regular curriculum + DBT STAR scheme + UGC-CE scheme)
 - c. **Extra Credits** for Volunteers of SOEC and Science Education initiative (SEI)
 - d. “Hands On training for undergraduate students”
 - e. Interdepartmental learning through Add on practical under STAR Scheme
 - f. “MOOCs” courses (SWAYAM, UGC): 25 students have enrolled
 - g. **Feedback on teaching - learning: (Scale 0 to 4)**
 - i. On-line Mechanism (ERP)
 - ii. Separate dedicated Feedback Team; meets every Saturday during implementation period
 - iii. Conducts regular orientation / awareness programmes for all UG and PG students
 - iv. Cut Off: 2.5; Teachers scoring below 2.5 are communicated
 - v. Conducted for all semesters for all academic programmes
 - vi. Parameters for teachers’ assessment
 - Communication skills (in terms of articulation and comprehensibility)
 - Knowledge base of the teacher
 - Inputs beyond the curriculum
 - Use of ICT and other teaching methods
 - Accessibility of the teachers in and out of the class (includes availability of the teacher to motivate further study and discussion outside the class)
 - Overall Quality of teaching
 - h. **Other Workshops**
 - Structural Geology for PG students
 - “Principles of Analogue Modeling” and “Cross Section balancing” for Geology teachers
 - ‘Web Development’ using “Ruby on Rails” for PG students of IMCA and Computer Science

- Lecture series on “Android programming”
- “Introduction to “PYTHON programming”
- Training on “PFMS EAT” Module
- “AVISHKAR” Orientation Lectures
- ‘Campus to Corporate’ programme organized by Career Facilitation Center
- Seminar on “Avenues and Opportunities in IPR” for PG students under CFC

i. **Other Skill Enhancement Programmes**

- LINUX awareness
- ICT and IoT
- Basics of Data Analytics with R
- Basics of machine Learning with R
- Basic Statistics using R software for Life Sciences
- Special lecture Series on IPR

• **Examination and Evaluation Reforms**

‘Workshop on “Examination Reforms” under autonomy (27th July, 2017) was conducted by Examination team of Symbiosis College of Arts and Commerce (Autonomous), Pune. The focus of the workshop was to discuss reformations in assessment / examination pattern for Arts subjects

- Earlier Three CIA
- Now Two CIA
CE-I Flexible Method
CE-II Online; Off line for Humanities and Languages
CE-III - Attendance + Active participation

• **Industry interface and career guidance**

- Sectorial Career Summit: To give an insight to the students about various opportunities in different allied sectors other than their academic specialization.
- Campus to Corporate Program: To upgrade the skills of the students according to the industry standards.
- Innovision (Research Project Competition): Innovision 2018 is a competition held to showcase innovative practices of students and teachers who have an exceptional research idea or creative project in their respective fields. The goal of the Innovision competition is to promote research and developmental activities and to encourage information exchange between researchers, developers, students and practitioners working in various academic disciplines, industry, public, government and social sectors.
- Industrial Collaboration for Internships and Projects:

Sr. No.	Name of Student	Name of Company	Outcome
1.	Ms. Aishwarya Kulkarni	Genova Biopharmaceuticals	Learned and handled techniques like isoelectric focussing (IEF), circular dichroism (CD) spectroscopy, HPLC, DSC, Peptide mapping etc. Project successfully completed and evaluated for the degree of M.Sc. (Biotechnology)
2.	Ms. Nidhi Satishkumar		
3.	Ms. Shalu Shukla		
4.	Mr. Shantanu Kolhe	TUV Nord	Learned and handled advanced analytical instruments like HPLC, GC, GCMS etc. Project successfully completed and evaluated for the degree of M.Sc. (Biotechnology)
5.	Ms. Simran Sethi		
6.	Ms. Tejal Upare		
7.	Ms. Umama Khan		
8.	Ms. Akanksha Awad	PRADO Pre-Clinicals	Learned animal handling and carried out <i>in vivo</i> studies. Project successfully completed and evaluated for the degree of M.Sc. (Biotechnology)
9.	Ms. Pracheta Munot		

Sr. No.	Name of student	Name of Company	Outcome
10.	Ms. Manasi Bharti	Objective Solutions Pvt. Ltd.	Learned strategies for clinical research and clinical data management.
11.	Mr. Abhay Deore		
12.	Ms. Jessica Bindra	Metal Innovation	Learned strategies for human milk banking
13.	Ms. Rukaiya Babat		
14.	Mr. Aditya Nachnekar		
15.	Mr. Shakoor Niyasdeen	Pune Municipal Corporation (PMC)	Learned strategies for solid waste processing. All students are framing their dissertation in this field.
16.	Ms. Akshata Kamble		
17.	Ms. Priti Jadhav		
18.	Ms. Roshani Bhalerao		
19.	Ms. Sayli More		
20.	Ms. Nisha Jain		

Memorandum of Understanding

- Signed an MOU with Blue Planet Solutions and Start-up world India which leads to the placement sponsorship and Internships to the P.G. Students.

- **Extension and Outreach**

- Science popularization through exhibitions and awareness generation programmes
- Reaching out to schools

Science Education Initiative (SEI) is a project that brings world-class Science and Math education to low-income classrooms)

- 37 student volunteers for SEI

- Impact of SEI**

Increase in the number of classrooms (5th to 9th Standard)

- 5th Standard: 41 Classrooms (1330 students)
 - 6th Standard: 25 Classrooms (720 students)
 - 7th Standard: 26 Classrooms (750 students)
 - 8th Standard: 05 Classrooms (240 students)
 - 9th Standard: 04 Classrooms (150 students)
 - Pune Science Festival: Exhibition of Science projects / posters by Municipal Corporation school students (98 students from 8 schools
24 students from grade 6 and 35 students from grade 7 classes appeared for level 1 of International Math Olympiad
- SOEC (Social Outreach and Enabling Center)**
 - 300 volunteers who work with 15 NGOs.
 - Introduced new assessment method for awarding extra credits
 - Working with 15 NGO's
 - SAATHI Enabling Center (For Differently abled Students)**
 - Orientation programmes
 - Paintings Exhibition by Shri. Chintamani Hasabnis for Blind students,
 - "Help the Blind Foundation" Chennai, Scholarships (Rs. 7,000 per student / year): 30 Students received scholarships
 - Scholarship from Hindustan Petroleum (Rs. 5,000 per student / year): 38 students received scholarships

- **Academic and Administrative Audit**

- Conducted every year for all departments / programmes

- **Human Resource Management**

Training of Teacher's at Centres of Higher Learning and Excellence

- IISER - 02 teachers
- Research-Based Pedagogical Tools (RBPTs) Workshops organized by DBT: 04
- NSTC, Lucknow, Organized by DBT: 02 teachers
- Faculty Development Programme organized by National Science and Technology Entrepreneurship Development Board (NSTEDB) Department of Science and Technology, Government of India teachers under DST-NIMAT Project: 02 Teachers

- e. HRDC: 06 Teachers.
- f. Special FDP programmes with IBM: 13 teachers
- g. Participation in RUSA Consultative Meets for preparing Curricula of Skill Development courses: 06 Meetings
- h. Workshop on “Safety Mechanism while Social Surfing in Virtual Spaces” under ICC.
- i. Seminar on, Science, Spirituality and Success.
- j. Digitization Dialogues (A dialogue on the opportunities and challenges, companies, academia and society face in the new digitization world, in collaboration with Consulate General of Sweden.
- k. Workshops under CE (College of Excellence) Scheme: 29.

- **New Programmes Introduced:**
 - a. M. Sc. Computer Applications
 - b. Certificate Course in MEAN Stack Web Development
 - c. Certificate Course in Intellectual Property Rights

- **Scholarships / Fellowships**
 - a. **The Champutai and Vinayakrao Gokhale Scholarship**
Students must have completed their Bachelors degree in Physics or Chemistry at Fergusson College and should be in the first 5 ranked students. Since there is a scholarship each for a male and female student, a separate ranked list is used for the first 5 male and first 5 female students
 - b. **Lupin Scholarship** to PG Students of Analytical and Organic Chemistry.

Infrastructure

- DLP's in all classrooms and laboratories
- Equipments for science departments
- 3D printer and VR devices
- Computer's added: 50
- E-resources- e-journals and e- books
- RFID for reference books (on going)
- Installation of Solar Roof Top (Botany - Zoology Building) under UGC XIIth Plan.
- Installation of Solar Roof Top (Resolve Building) under QIP Scheme of SPPU.

Research Output

Projects Under CE (College of Excellence) Scheme of UGC

- MAST Programme (Model for Arts and Science teachers): 95 projects
- LIFE Programme (Learn to Innovate For Excellence): 08 projects
- STAR Programme (Special Teacher and Researcher Programme): 14 projects

Research Output	2016-2017	2017-2018
Papers Presented		
National Conferences / Seminars	Arts:06 Science:05 Total:11	Arts:10 Science:21 Total: 31
International Conferences / Seminars	Arts: 01 Science:03 Total:04	Arts:02 Science:14 Total:16
Participation in Workshops	Arts:08 teachers Science:26 teachers Total: 34 teachers	Arts:02 Science:14 Total: 16 teachers
Research Papers Published		
National Journals (peer reviewed)	Arts:10 Science:16 Total: 26	Arts: 11 Science: 11 Total: 22
International Journals	Arts: 08 Science:08 Total: 16	Arts: 04 Science: 16 Total: 20
Books	Arts: Nil Science:02 Total: 02	Arts: 01 Science: 02 Total: 03

Research projects	Arts: 01 01 Economics (BCUD; 1,70,000) Science: 02 (Computer Science) (BCUD; 1,20,000 +1,80,000) 01 (Chemistry) (BCUD; 2,10,000) 01 (Biotechnology) (BCUD: 1,60,000) 03 (Geology) (BCUD: 1,30,000+1,40,000) (UGC: 2,70,000) 02 (Physics) (BRNS; 28,31,1025) (BCUD: 2,50,000) 01 (Microbiology) (BCUD; 1,80,000) Total no. of projects: 11 Total: Rs. 30,12,1025.00	Arts: Nil Science: 01 (Environmental Science) (BCUD - 75,000.) 01 (Electronic Science) (BCUD - 2,60,000.) 01 (Electronic Science) (BCUD -1,70,000) Total no. of projects: 03 Total: Rs. 5,05,000.00
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Activities under DBT STAR Scheme (Human Resource Development)

- Biotechnology**
 Hands on training: 06; no. of beneficiaries: 350; Projects: 15; FDP: 02; Guest Faculty Interaction: 08
 Industry-Academia Summits; GENNOVATION, No. of beneficiaries: 310
- Chemistry**
 Hands on training: 05 + 11 Add on practicals; no. of beneficiaries: 296; projects: 10; Visits: 05; Guest Faculty Interaction: 07
- Electronic Science**
 Hands on training: 09 (03 interdepartmental); no. of beneficiaries: 576; Add on practicals: 11; no. of beneficiaries: 600; FDPs: 04 (interdepartmental), no. of beneficiaries: 118; projects: 10; Visits: 05; Guest Faculty Interaction: 07
- Microbiology**
 Hands on training: 10 (01 interdepartmental); no. of beneficiaries: 388; Training for School Teacher's: 03; No. of beneficiaries: 75; Guest Faculty Interaction: 08
- Physics**
 Hands on training: 07, no. of beneficiaries: 174; Projects: 04; Visits: 04; Guest Faculty Interaction: 18
 International Students' Conference; Public Awareness Programme; Seminars - focus on Medical Dosimetry; Exhibitions on Science Popularization; SEI
- Zoology**
 Hands on training: 10; no. of beneficiaries: 1106; Add on practicals: 15; no. of beneficiaries: 1496; Guest Faculty Interaction: 10; Teaching Model on ETC (Electron Transport Chain)

Other Compliances processed by IQAC:

- Communication with University, UGC and DBT regarding autonomy and Schemes
- Compliance of all schemes (Presentations / Reports / Accounts etc.)
- Requirements with regard to special infrastructure
- Application and implementation of various schemes
- Editing / corrections of all syllabi under autonomy
- Reports to be communicated to RUSA, Maharashtra
- Filling of on-line information of University / UGC / NIRF