



Shri Sangameshwar Education Society, Solapur  
Kannada Linguistic Minority Institute

## **SANGAMESHWAR COLLEGE, SOLAPUR** **AUTONOMOUS**

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### ***6.5.3 IQAC Annual Report 23-24***

#### **Criterion-wise Highlights: 2023-24**

##### **Criterion I: Curricular Aspects**

- **NEP 2020:** UG I (all faculties) and PG I (all faculties) syllabus implemented.
- B. A. Civil services third year, M. A. Geography and M. Com costing second year are newly started.
- The syllabus for the aforementioned courses had been approved by BOS in May 2022 and at the **8<sup>th</sup> AC (20/07/2023)** and **8<sup>th</sup> GB (27/07/2023)** meetings.
- Syllabus of **31 Programmes revised**.
- Minutes of Governing Body / Academic Council/ Finance Committee / BOS / IQAC meetings made available on website.
- Courses focusing on employability/entrepreneurship/ skill development- **947**
- Under **31** new programmes **451** new courses implemented
- Choice Based Credit System (CBCS) is offered for **32 Programmes of UG and PG**.
- The curriculum of **851 courses** integrates cross-cutting issues relevant to Professional Ethics, Gender, Environment and Sustainability and Human Values.
- Transferable and life skills- **10** value-added courses / certificate/ skill development courses and **1113 students enrolled**.
- Field visits / Internship / student projects: -**1337 students undertook field visits (524) /student projects (738)/ internships (75)**.
- IQAC collected Feedback on curriculum from students, teachers and alumni and shared with departments for further analysis.

## **Criterion II: Teaching, Learning and Evaluation**

- Number of sanctioned seats: **2255 UG PG I**
- **4082** students admitted for various courses under various programmes. (**1756 UG & PG I**)

### **Programme wise admission details.**

<b>Under Graduate Course I</b>		
1	B.A.	435
2	B.A. CS.	29
3	B.Com.	431
4	B.Com. Marketing	13
5	B.Sc.	218
6	B.Sc. ECS	95
7	B.B.A.	115
8	B.C.A.	119
<b>Post Graduate Course I Admissions</b>		
9	M.A. (English)	26
10	M.A. (Hindi)	14
11	M.A. (Political Sci)	16
12	M.A. (Sociology)	32
13	M.A. (Psychology)	27
14	M.A. (Geography)	21
15	M.Com.	45
16	M.Com. Costing	50
17	M.Sc. Computer Sci.	29
18	M.Sc. Organic Chemistry	25
<b>Research Courses</b>		
19	Ph.D	
<b>One Year Post Graduate Degree Course</b>		
20	BJMC	7
21	B.LIB	9
<b>TOTAL</b>		<b>1756</b>

- **1010 seats filled** against reserved categories (SC, ST, OBC, Divyangnan, etc.) as per the reservation policy of Government of Maharashtra.
- Number of seats admitted under reservation category (Number of seats include minority and non-minority admissions).

CourseName	Total Number of seats admitted 2023-24 (Minority + Non Minority)					
	SC	ST	OBC	Gen	Physically Challenged	Total
<b>B.A.-I</b>	126	4	172	133	1	435
<b>B.A. CS-I</b>	7	1	10	11	0	29
<b>B.COM-I</b>	69	2	190	170	0	431
<b>B.COM MARKETING-I</b>	3	0	4	6	0	13
<b>B.SC.-I</b>	18	2	86	112	0	218
<b>B.B.A. I</b>	21	0	45	49	0	115
<b>B.C.A.I</b>	6	0	48	65	0	119
<b>B.Sc ECS I</b>	6	0	31	58	0	95
<b>B.J.M.C.</b>	0	0	5	2	0	7
<b>B.LIB.&amp;I.SC.</b>	2	0	2	5	0	9
<b>M.A.-I ENG</b>	4	0	9	13	1	26
<b>M.A.- I HINDI</b>	4	0	5	5	0	14
<b>M.A.-I POL.SCI.</b>	2	0	7	7	1	16
<b>M.A.-I PSY.</b>	7	0	7	13	0	27
<b>M.A.-I SOC.</b>	9	0	14	9	0	32
<b>M.A.-I GEOGRAPHY-I</b>	4	1	10	6	0	21
<b>M.COM.-I</b>	4	0	19	22	0	45
<b>M.COM.-COSTING I</b>	4	0	15	31	0	50
<b>M.Sc. (comp).I</b>	3	0	11	15	0	29
<b>M.Sc. (Organic chemistry).I</b>	3	0	8	14	0	25
<b>TOTAL</b>	<b>302</b>	<b>10</b>	<b>698</b>	<b>746</b>	<b>3</b>	<b>1756</b>

Teachers identify **slow and advanced** learners *through oral questions; marks gained in previous class and organize orientation lectures guidance accordingly.*

There are **78 Fulltime teachers** working in the institution (41 permanent faculties + 37 Temporary faculties).

The Student: Teacher ratio is 4082:78= **52.33**

**Teaching learning process:**

- Implementation of NEP 2020 and designing of curriculum and Pedagogy accordingly.
- Faculty members organised various activities like internship, projects, article writing, essay writing, industrial visits, field visits for experiential learning, participative learning and used problem-solving methodologies-based learning process.

#### **ICT utilization in teaching leaning process:**

- Departments equipped with ICT instruments.
- Online lectures were held by using Google meet, Zoom application, Microsoft teams.
- Teachers prepared their own PPTs, video lectures and used Google classroom to share notes in word and PDF format, to share video lectures, e-books, e-journals along with email id and WhatsApp group for communication.
- Some of science practicals were conducted virtually with the help of VLABS, IIT Bombay.
- 36 fulltime teachers were allotted list of students for mentorship.
- Academic calendar is prepared in advance and displayed on website.
- **49 full-time teachers** are having **Ph.D. degree.**
- Total teaching experience of teachers: **1014 years.**
- **It took average 30 days for the declaration of results** from the date of last semester-end/ year- end examination.
- Number of students' complaints/grievances against evaluation – **96**

#### **Evaluation Process:**

- In this academic year, Institution conducted examination under NEP 2020 for first year UG and PG courses.
- Institution adapted 40:60 patterns for CA and SEE for theories and 50:50 patterns for Practical for courses under NEP.
- 30: 70 pattern for Non NEP courses.
- The continuous Internal Assessment (CIA) examination was conducted as per the statute accepted and approved by the Governing body and Academic Council, which is called Continuous Assessment (CA).
- The SEE (Semester End Examination) was conducted at the end of both semesters November 2023 and March 2024.

- The software of CIMS Master Soft ERP Solutions Pvt. Ltd assisted for various examination activities from allotment of seat number to declaration of results.
- POs, PSOs and COs displayed on website.
- **Results**
  - Number of Students appeared in final year examination – 1262
  - Number of Students cleared the final year examination – 993
  - **Pass Percentage: 78.68 %**
- **Student Satisfaction Survey (SSS)** on overall institutional performance was carried though software provided by CIMS Master Soft ERP Solutions Pvt. Ltd, whereas 1264 students responded and more than 50% students responded the questionnaires and they are 100% satisfied with institutional performance.

### **Criterion 3: Research, Innovations and Extension**

*The College Research Committee (CRC) looks after all the aspects related to research environment in the institution. The institution has detailed research policy to nurture the research culture in the institution.*

- **21** teachers recognized as research guides by PAH Solapur University, Solapur.
- **48 Ph.D. students registered in 07 Research centers** of this institution.
- **56 Research paper published**- 02 in UGC - CARE list, 02 in Springer, 05 in Elsevier, 47 in Peer Reviewed Journals respectively.
- **Dr. D. S. Mhamane** has been selected as a *Young Associate of Maharashtra Academy of Science* in **December 2023**.
- **10 book chapters / books published**
- **10 workshops/ seminars/ webinars** conducted-
  - Research Methodology: 02,
  - IPR: 01,
  - Entrepreneurship 02,
  - Skill Development: 05
- Increase in the number of citations in SCOPUS = **223**
- Average h – index based on Scopus: **43 / 9 = 4.77**
- **3 Collaborative activities through MoUs** for research and innovations.
- Many of the science faculty members are recognized in the A – D Scientific List.

#### **Criterion 4: Infrastructure and Learning Resources**

##### **Physical Infrastructure:**

- 16,517.6 sq. meters campus with buildings and open space, Botanical garden as well all amenities.
- **86 well-furnished classrooms**
- 2 Seminar Halls
- 18 class rooms with LCD facilities,
- 01 Language Laboratory
- 03 Administrative Rooms (Office)
- 01 Commerce Lab
- 5 Ramps
- Separate department rooms of Language and Social Science Departments
- Smt. Sarojini Annaraj Kadadi Computer Institute.
- 25 laboratories are well furnished with adequate equipments.
- 300 Computers systems to facilitate office, administration, teaching and learning, and students' utilization purpose.
- 01 Network Resource center
- 01 Language lab
- 02 Computer labs connected with LAN.
- 5 different software used for administration, data collection and processing. IT Solutions/Net Connectivity (CIMS, Tally, Taxbase, ETNL Techmart Solutions)
- 01 Botanical Garden
- 01 canteen
- 2 Libraries.
- 01 Ladies Common Room and Corner in the college campus.
- 01 Prof. Basavaraj Nelvegi Clinical Psychology Laboratory, A Counseling Centre with trained full-time counselor offering individual and group counseling.
- 01 hostels for boys, 01 hostel for girls

##### **Infrastructure for cultural activities, yoga, sports and games (indoor and outdoor) including gymnasium, yoga Centre, auditorium etc.**

- A separate sports Ground measuring 20,797.55 sq mtrs area.

- There is a separate office, Gym Centre (Gym Hall 40x30 Ft), Yoga Centre and different Grounds.
- 400m Athletics Running Track i.e., outdoor games are available.
- Indoor game facility – Yoga room and Table-Tennis,
- The college participated in 30 different games during the year.
- Organize sports activity at intercollegiate and university levels
- Organized sports activity in Basketball, Cricket, Handball, Kho Kho, Kabaddi and Baseball.
- 424 students participated in different sports activity.
- Sports equipment's- A machine with 08 stations for the weight training, Taekwondo Best-Physique also available here.
- The institution has tie-ups with Government and Non-Government need based infrastructure facilities. Tie ups for Games like Swimming, Shooting, Badminton, Wrestling, Handball, Football, Hockey, Cricket, Basketball with associations and the Municipal Grounds for both practice and arrangement of sports events.
- **Best college in Sports from 2019 to 2024 continuously.**

**Expenditure for infrastructure augmentation, excluding salary, during the year (INR in Lakhs) – 41.85857**

- **Library infrastructure**
- Name of the ILMS Software: SOUL 3.0
- Nature of Automation: Fully Automated
- Year of Automation: 2008
- Automated Services provided

**Library Services**

- Reference Service
- Selective Dissemination of Information (SDI)
- Current awareness service (CAS)
- Documentation service
- Inter-Library loans and Document Delivery services through DELNET
- Online Public Access Catalogue (OPAC) service provided through Library



### **INFLIBNET N-LIST and DELNET facilities-**

- Library provides e-learning resources to the users by providing user ID and password. 6000+ e-journals and 31, 35000 + E-Books are available on this website.
- CDs and DVDs are available for various subjects.
- Rare Book Collection.

### **Expenditure on purchase of books/ e-books and subscription to journals/e-journals during the year (INR in lakhs) – 15.78533**

- Number of teachers and students using the library per day during the year- **251**

### **IT Infrastructure**

- Utilization of IT resources under IT policy.
- 193 computers available for students.
- Student - Computer ratio :: **4082:193** = 21.15(21 students per computer)
- Bandwidth of internet connection: 80 Mbps
- Video surveillance cameras are installed at key points such as the entrances and exits of buildings and examination venues.
- Well-designed Informative website

### **Expenditure incurred on maintenance of physical and academic support facilities, excluding salary component, during the year = 158.28426 (INR in Lakhs)**

### **Criterion 5: Student Support and Progression**

1213 students benefited by various scholarships provided by the Government.

Capacity Development and Skill Enhancement activities:

- **35 programmes were organized**
  - Soft skills (9),
  - Language and Communication skills (3)
  - Life Skills (Yoga, Health and Hygiene) (16)
  - Awareness of trends and Technology (07)
- **1028 students benefited from guidance/coaching for competitive examinations and career counseling offered by the institution:**
  - Coaching for competitive examinations- 3 activities and 238 students.
  - Career counseling- 8 activities and 790 students
- **Grievances Redressal mechanism at the institution: includes following committees - *Minutes of following committee meetings are uploaded on website.***

<b>Name of the committee</b>	<b>Number of meetings</b>
ICC (Internal Complaint Committee)	<b>06</b>
Grievance Redressal Committee	<b>01</b>
Anti- Ragging Committee	<b>02</b>

#### **Placement details:**

- Off Campus Selections – 36, In campus selections- 40, Total selection: 76
- **Students progressing to Higher Education:**

<b>Name of the Programme</b>	<b>Number of TC Issued</b>
BA	<b>144</b>
BCOM	<b>220</b>
B.Sc.	<b>150</b>
BBA/BCA/BCS	<b>118</b>
<b>Total:</b>	<b>632</b>

- **Four students qualified Competitive Exam:**
  - Department: Commerce - 01 Chartered Accountant
  - Department of Chemistry - 02 SET and NET

**Outstanding performance in sports activities:**

<b>Rank</b>	<b>Name of the Student</b>	<b>Level</b>	<b>Name of the Game</b>
3 <sup>rd</sup>	Ms. Kalyani Prabhakar Chavan	International	Power Lifting
2 <sup>nd</sup>	Mr. Vinit Franklin Dinkar	State	Athletics (100 Mtr. Run)
2 <sup>nd</sup>	Mr. Vinit Franklin Dinkar	State	Kho-Kho
27 <sup>th</sup>	Mr. Pawan Bansode	State	0832 – India Open Competition Rifle/Pistol NR – Events August 24 held at Goa

- **Outstanding performance in cultural activities**
  - 3<sup>rd</sup> Rank : Fine Arts, Indradhanu Youth Festival
  - 1<sup>st</sup> Rank: Group Song, Folk dance, Poetry
  - 2<sup>nd</sup> : Mimicry
  - 3<sup>rd</sup> : Hindi Elocution
- **Student Participation in University level Competitions**
  - 140 students participated in various sports and cultural events organized by PAHSUS and were selected for inter-university competitions.
- **Sports events / competitions organized by the institution:**
  - University Cricket Matches
- **Cultural events / competitions organized by the institution: 21**
  - Cultural - 19
  - Sports - 02

## **Criterion 6: Governance, Leadership and Management**

### **Institutional Vision and Mission**

- Properly communicated and displayed on admission brochure and institutional Website

Institutional practices of decentralization and participative management

- Decentralization is practiced through several Statutory, Non statutory and Ad-hoc committees.

Institutional Strategic/ Perspective Plans:

### **Strengthening the research component**

- The institution has **07** research centres,
- **21** research guides, and **48 Ph.D. students**,
- Total number of publications in UGC Care and Scopus/Web of Science indexed (peer reviewed): **56**
- Total number of accepted research proposals: **03** (1 from Punyashlok Ahilyadevi Holkar Solapur University) and (two from within)
- **1** faculty member elected as Young Associate of Maharashtra Academy of Sciences (MASC) in the subject of chemical sciences.
- **11** faculties recognized as World Scientists in AD Scientific Index, and
- **9** faculties have their considerable scientometric index (h-index).
- Convened seminars on the "Research Methodology: **2**" "Intellectual Property Rights: **1**" Entrepreneurship: **2** and " Skill development: **5**"
- Accomplished student exchange for research through collaboration and faculty published high impact publications. Many publications are in pipeline

### **Focused approach on curriculum design and development through NEP Implementation:**

The College has developed a multidisciplinary/interdisciplinary credit structure, syllabus for the courses decided was framed by the respective departments, and Curriculum and syllabus are built around the Outcome Based Education paradigm.

- **ABC Credits:** Students were oriented how to open ABC Account
- Enhancing ICT facilities for effective teaching and learning among the learners and students

- **The functioning of the various institutional bodies is effective and efficient**
- Minutes of meetings of following bodies displayed on the website.

<b>Governing Body</b>	<b>Academic Council</b>	<b>Finance Committee</b>	<b>BOS (each Subject)</b>	<b>IQAC</b>
<b>10<sup>th</sup></b>	<b>10<sup>th</sup></b>	<b>05<sup>th</sup></b>	<b>04</b>	<b>04</b>

- **Institution possesses well defined policies as listed below:**
  - Policy on Divyanga Friendly environment
  - Policy on Anti Ragging
  - Policy on Research and Innovations
  - Policy on IT
  - Policy on Code of Ethics
  - Policy on Utilization of Physical facilities
  - Waste Management Policy

**Implementation of e-governance in areas of operation:** Administration, Finance and Accounts, Student Admission and Support Examination

E-governance through **MIS software** purchased from **Master Soft Cloud Computing-Pvt. Ltd.**

- Clear data from admissions, fee payment, data management, and examination work etc.

**Tally software** manages financial data, computation of accounts and also assists in audit

- **Welfare schemes for teaching and non-teaching staff**
  - *Sangameshwar Sevak Sahakari Patsanstha Maryadit Solapur* (Mainly offers big loan and educational loan to employees)

**Loan Scheme for employees:**

- **Educational Loan given in 2023-2024 for 3 faculty members: Rs. 4,50,000/-**
- **Educational Loan given in 2023-2024 for 19 non-teaching members: Rs. 28,50,000/-**
- **Big loan list to 10 non-teaching members: Rs. 79,00,000/-**

Gunvant Palya Yojana (felicitation of scholars– ward of employees)

Provide assistance in placement and promotions of faculties

**Financial support to students and faculty members of college *for registration fees/travel fare etc. to attend and present their research works at National and International level conferences and seminars.***

- **Motivation to faculty members to attend Orientation, Refresher and faculty development programmes for professional development**

<b>Name of the program</b>	<b>Number of faculties attended</b>
Refresher/ FDP	06

**Professional development/ administrative training programmes organized by the Institution for teaching and non-teaching staff**

- **Workshops-01**
- **IPR-01**
- **Institutional strategies for mobilization of funds and the optimal utilization of resources**

The following committees are involved in planning and resource mobilization.

- Planning and Evaluation committee
- Purchase Committee
- Finance Committee
- Internal Audit
- External Audit (by Government Agency)

## **Criterion 7: Institutional Values and Best Practices**

### **Measures initiated by the Institution for the promotion of gender equality**

- Annual Gender Sensitization Action Plan comprising Security, Awareness, Equality, Support, Respect
- Gender Audit for Academic Year 2023-24
- Active Internal Complaints Committee
- 17 different activities organized for gender sensitization/ awareness

### **Facilities for alternate sources of energy and energy conservation:**

- Roof top solar panels, Energy saving equipment's, Kirloskar Green Power Generator, LED Bulbs

### **Management of the degradable and non-degradable waste:**

Different collection, management safe disposal approaches for- Non-Biodegradable waste, Bio degradable waste, Chemical wastes, E-waste

- Solid non-biodegradable waste given to Municipal Corporation Collection Vehicle.
- Bio degradable waste is collected and decomposed in vermiculture pit

### **Water conservation facilities available in the Institution**

- Rain water harvesting unit
- Bore well recharge

### **The institutional initiatives for green campus are as follows:**

- Policy for Green Campus
- Restricted entry of automobiles in main campus (academic area)
- Pedestrian-friendly pathways
- Ban on use of plastic
- Landscaping

### **The institution's initiatives to preserve and improve the environment and harness energy are confirmed through:**

- 7 beyond the campus environmental promotional activities were carried

### **Disabled- friendly and barrier-free environment**

- Number of Divyanga students admitted: UG-15, PG-02
- There is well defined Policy for Divyanga students
- Equal Opportunity Cell takes activities and care of divyang students

### **Institutional efforts/initiatives in providing an inclusive environment**

- Celebrated various festivals
- To aware population growth organized Rally on World Population Day
- To express students' art creativity organized Rangoli Making Competition

- Distributed Educational Stationery, Organized Organ Donation Rally
- Provided of social work experience through Dasoh Seva at Shri Siddheshwar temple
- Marketing Expo Contest 2023' on the eve of "Raksha Bandhan: The Festival of Sacred Threads
- Organized Blood Donation Camp, Food Donation Programme
- Participated in Meri Mati Mera Desh Abhiyan
- Celebrated Vigilance Awareness Week for prevention of corruption
- Distributed dress materials, cloths to the needy people via "Wall of Humanity"
- Organized Diwali Faral distribution to the needy
- To create linguistic harmony organized Hindi festival competition award and guest lecture on Education subject: A reflection on the ideology of Dr Babasaheb Ambedkar
- To preserve Indian customs and culture within a global educational framework celebrated traditional days and Food Carnival
- To create social harmony Visited to backward class girl's orphanage

**Sensitization of students and employees of the institution to constitutional obligations: values, rights, duties and responsibilities of citizens**

- Topics covered in the curriculum include values, rights, duties, and responsibilities of citizens.
- Arranged a sensitization programme for November 26, 2023, Constitution Day. Sanvidhan Din, Shapath
- Organized Rally on National Voters Day
- Preamble of the Indian Constitution displayed ([sangameshwarcollege.ac.in](http://sangameshwarcollege.ac.in))

**The institution has a prescribed code of conduct for students, teachers, administrators and other staff**

- Policy Document for Professional ethics and Code conduct
- 4 awareness program on code of conduct were carried out

**Best Practices:**

1. Enhanced Industry Academia Interface
2. Implementation of Virtual Labs in Enhancing Practical Learning and Skill Development



## **Best Practices 1. Enhanced Industry Academia Interface**

### **Objectives of the practice**

1. To strengthen the Industry-Academia Interface
2. To prepare industry human resources that are skill-oriented that fulfill their demands
3. To encourage students to become entrepreneurs
4. To successfully put the NEP suggestions into practice

### **Context**

Life on the planet is becoming a reality through the fourth industrial revolution. In order to achieve the Sustainable Development Goals and the Revolution, the National Education Policy 2020 requires an appropriate industry-academia relationship. Today, academic programs' industry relevance determines their relevance. For the young populace looking for a career, industrial work experience is necessary. In light of this, the IQAC chose to implement this best practice of enhancing the present institutional and industry relationship.

### **Practice:**

Industrial visits are planned with the goal of gaining an understanding the manufacturing process, technological know-how, efficient use of byproducts, and the cooperation between research and educational institutions. Students gain a practical understanding of a company's production, marketing, and human resources operations. Students gain from industrial/business trips from the perspective of their career ambitions as well.

During the academic year 2023-24, the following industrial excursions were organized:

**Department of Commerce:** Visit to Car Industry, Yarn Manufacturing Company/Textile Industry/Dairy Farm/Agro-industry

**Department of Geography, Economics and Sociology:** Visit to sugar factory

**BBA Department:** Visit to milk dairy food producers.

**Department of Electronics:** FM radio.

**Department of Chemistry:** Visited Chemical and Pharmaceutical industry

**Students of B.A.(Civil Service):** visited Raisin manufacturing plant.

**Evidence of Success:**

1. Learning became hands-on.
2. Gained knowledge of the workplace culture in which they will operate in the future.
3. Learning became useful.
4. The visits were planned for students in order to foster teamwork and leadership abilities.
5. The students gained critical thinking skills.
6. Students were given the opportunity to complete their internship, which gave them experience in communication, leadership, and marketing.

**Resources required:** Guided tour for an industrial visit

**Problems encountered and resource required**

1. Students' knowledge of the industrial environment, its products, and its practical uses is lacking.
2. Less analysis and interpretation are given to the situations in order to link them to the theoretical facets of statistics.
3. Too little time to collect data on the visited site, where permissions can often be problematic.

**Title of the Best Practice 2:****Implementation of Virtual Labs in Enhancing Practical Learning and Skill Development****Objectives of the Practice:**

- To bridge the gap between theoretical knowledge and practical applications.
- To improve students' understanding of complex scientific concepts easily.
- To provide students' hands-on experience and exposure to ICT based teaching learning practices.
- To equip students with digital literacy skills essential for their successful career in future.

**The Context:**

Sangameshwar College in Solapur is dedicated to giving students a top-notch education with a focus on expanding their academic and practical knowledge. The COVID-19 epidemic and other recurring disturbances frequently limited the availability of traditional hands-on instruction in physical laboratories. Oral comprehension of certain theoretical concepts was extremely challenging. In order to overcome these obstacles, the college implemented IIT Bombay's Virtual Labs program, which has revolutionized the way students study by utilizing animated videos and simulation-based exercises found in virtual labs.

**The Practice:**

The following crucial elements have helped Sangameshwar College successfully implement the Virtual Lab Program:

- Orientations and seminars were employed by faculty members of different departments to introduce students to the idea of virtual laboratories.
- Our college is affiliated with IIT Bombay's Virtual Lab. The college has been using the Virtual Labs created by Amrita University, COEP, IIT Bombay, and other IITs.
- The curriculum incorporates virtual labs, particularly for certain practical's that were challenging to do because of resource limitations. Since the virtual lab platform featured educational resources like virtual equipment, experiment theory, self-assessment tools, web-based materials, video lectures, and animated demonstrations, students could test their knowledge of the

experiment's subject matter and theory. Experiments could be repeated as often as necessary for students to learn.

**Evidence of Success:**

**Better Learning Outcomes:** Virtual labs are acknowledged by both teachers and students as a cutting-edge teaching-learning method. Students were pleased with their virtual lab experience, stating that it allowed them to get past the constraints of traditional labs and gave them the freedom to experiment and study at their own speed. Additionally, they had a conceptual understanding of difficult ideas thanks to animated movies that were constantly accessible on the virtual lab platform.

**Problems Encountered and Resources Required:**

- Due to erratic or poor internet connectivity, students had trouble accessing virtual laboratories.
- Adapting the new technology by the students and the teachers

**Resources Required:**

- Sustained partnership with IIT Bombay for access to the virtual lab resources and updates to the platform
- Enhanced Internet Connectivity
- Training for faculty and Students
- Periodic workshops and training sessions

**Impact of the Practice:**

- Through interactive virtual experiments and, when needed, animated movies, students have improved their practical abilities and
- Gained a greater knowledge of scientific concepts and principles.
- Their analytical and problem-solving abilities were also refined by the encounter.
- Gained technical skills that are in demand in a variety of industries, business etc.