



Rayat Shikshan Sanstha's

# Yashwantrao Chavan Institute of Science, Satara

(Autonomous College), Sadar Bazar, Satara – 415001, Maharashtra, India,  
(Lead College of Karmaveer Bhaurao Patil University, Satara)

• Uni. Affil. No. UKF/565/U/5

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• NAAC Reaccredited: 'A' Grade with CGPA 3.57 • UGC-CPE • DST-FIST • DBT-STAR, • UGC-PARAMARSH  
• ISO-9001-2015 Certified • RUSA Component 8 • NIRF, IIC, ARIIA Rankings • UNAI Membership

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DOCUMENTATION

## Criterion VII: Institutional Values and Best Practices

### 7.3 : Institutional Distinctiveness

#### Promotion of Science Education and Research

The institute strives towards promotion of science education and research to encourage scientific innovations and creativities to benefit scholarly students, faculties and budding scientists that expands the boundaries of knowledge for wellbeing of society. This institutional distinctiveness addresses few of the **sustainable goals of UNESCO** like good health and well-being, quality education, gender equality and climate action. In this connection, the institute is internationally collaborated through **membership of United Nations Academic Impact**. Being situated in semi-urban area in Satara City, institute is among **Eminent Autonomous College fosters science education though multidisciplinary**. Several core elements have contributed significantly towards institution's science education and research promotion efforts.

- **Academically Flexible Science Education:** Institute offers a wide academic flexibility in science education through 29 UG and 15 PG programs.
- **Cutting-edge Research Facilities:** Research permeates the academic landscape, spanning across undergraduate and postgraduate levels facilitated by **10 research centres** endorsed by the affiliating University.
- **State-of-the-art instrumentation facility, C-III Center and Center of Excellence** equipped with modern research amenities.

- **Financial Commitment to Research and Innovation:** Institute has invested over Rs. 280 lakhs to support vibrant research environment. Furthermore, **Rs. 220 lakhs** have been set aside as a **Research Corpus fund** to support **research initiatives**. Grants from **RUSA, DBT, DST, UGC, Shivaji University** and other sources strengthened the research endeavours. Construction of dedicated '**Golden Jubilee Building for Research and Extension**' is among noteworthy research and innovation move by the institute.
- **e-Yantra Lab Setup:** A flagship initiative of MoE of Government of India i.e. National Mission on Education through ICT sanctioned to IIT, Bombay set-ups **e-Yantra Lab** in HEIs. **Our institute is one of 400+ eLSI colleges under the e-Yantra Lab Setup** as well as **Virtual Lab partner of IIT, Bombay**. Moreover, institute have a **local chapter of NPTEL/SWAYAM**. Such initiatives contributed significantly in **uninterrupted education during covid-19 pandemic**.
- **Comprehensive Research Policies and SOPs:** Institute have **well-defined policy** of Research and Development with **Research Promotion Emphasis and manuals** aimed at fostering conducive research environment and augmenting research output in terms of **publications, patents and resolving societal issues**. **Research Promotion and Ethics Committee** through a stringent research ethics policy and plagiarism check facility underscores the institution's unwavering commitment to ethical standards in research.
- **Research Conventions** Institute regularly hosts a myriad of conferences, seminars, training sessions and workshops that provides platform for intellectual exchange, collaboration and dissemination of research findings. The initiatives like **MBL, PBL, PD3P4** (Project Design Development Demonstration Patent Prototype Product Publication) also ensures the inculcation of scientific temperament among students. **YCIS Hackathon, Rayat Innovation Challenge, Avishkar Research Conclave and National Science Day events** motivates students to discover research and innovation opportunities.


- **Efficient Research Mentoring:** Faculty members actively engaged in research guidance and inspire students in their research pursuits (UG, PG and Research degree levels).
- **Promotion of Innovation:** In alignment with its commitment to nurturing innovation, the institution established **Center for Invention, Innovation & Incubation** for availing facilities like **skill training, innovation, incubation and co-working space**. The center functions as a business incubator to support young innovators and businesses and enable them to thrive.
- **Start-up Clinic and Fab lab** (Makers Lab) encourages innovation based entrepreneurship journey. **Karmaveer Bhaurao Patil research Foundation** (section 8 company) and **Center of Excellence in Artificial Intelligence in Application Development** also strives for innovation initiatives.
- **Participation in Innovation-Based Initiatives of GOI:** Institute regularly participates in Ministry of Education (MoE), Government of India's innovation-based initiatives and rankings. The institute registered its **Institution's Innovation Council** at MoE's Innovation Cell. Alongside IIC, the institute also participates in **NIRF and ARIIA initiative of GOI**.
- **Global Contribution in Quality Education:** Through the **membership of United Nations Academic Impact**, the institute supports the global movement of minds to promote quality education and new culture of intellectual social responsibility.
- **Focus on Intellectual Property Rights:** Apart from integral part of curriculum, the institute conducts workshops on IPR and Research Methodology ensuring students well-versed in critical aspect of research and innovation.
- **Entrepreneurship Development Cell and Skill Hub:** Institute established the **ED Cell and Skill Hub under RUSA** in 2019 aimed at nurturing creative thinking and supporting students in translating innovative ideas into successful entrepreneurial ventures.

- **Industry and Research Advisory Boards:** Institute have functional Advisory board at institutional (**Institute-Industry Advisory Board** and **Institute-Research Advisory Board**) departmental levels which help in shaping research priorities, fostering interdisciplinary collaborations and industry-academia connect.
- **Recognition of Research Outcomes:** Institute recognizes and appreciates the researchers by honouring them in **Annual Research Festival** for outstanding contribution in the academic year. IQAC is serving as a catalyst for further excellence in research and innovation through the provision of incentives.
- **Societal engagement:** Through diverse **research and innovation based outreach and extension activities** institute engaged in extension of science education and research for societal betterment. Activities focusing energy conservation, household chemicals, biofertilizers, organic farming provides scientific insights and empowers the society.

**Impact of these initiatives is profound through following outcomes,**

- **NIRF Rank Band:** 101-150 (2021), 151-200 (2022)
- **IIC Ranking Status:** 4 STAR (2020), 3.5 STAR (2022)
- **ARIIA Ranking:** PERFORMER status (2021).
- **Organization of about 250 scientific events.**
- **Research Outcome and Deliverables:**
- **Research papers in UGC-Care and Scopus:** 358
- **Books and book chapters:** 222
- **Students research articles:** 200
- **Patents:** 16 granted, 26 published
- **Prototype development:** 50
- **Products launched:** 13
- **48 students awarded Ph.D. and 46 pursuing.**
- **20 faculty members in top 2% researchers list of World AD Scientific Index.**
- 10 faculty members as **Innovation Ambassadors** of IIC, MoE, Government of India.

- **Research Collaborations:** The institution has established strategic MoUs and collaborations with prestigious international organizations for fostering research and development including NanYang Academy of Sciences, Singapore, Sung Kyun Kwan University, South Korea, Bulgarian Academy of Sciences, Bulgaria and Dongguk University, South Korea.
- **Research and Innovation Extension through Esteemed Alumni:** Institutional efforts on science education, research and innovation are carried further by the alumni by occupying positions at world reputed universities across the globe. With a relentless focus on nurturing talent, fostering creativity, and pushing the boundaries of knowledge, the institution continues to elevate the standards of science education, research and innovation in the academic landscape.

  
**Dr. Jaykumar J. Chavan**  
Coordinator, IQAC



  
**Prin. Dr. B. T. Jadhav**  
Chairman, IQAC