

UDAYBHANU PANDHARINATH SIRDESHMUKH

Assistant Professor of Biotechnology

Rajarshi Shahu Mahavidyalaya (Empowered Autonomous), Latur - 413512, Maharashtra, India
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PROFESSIONAL SUMMARY

Accomplished Assistant Professor of Biotechnology at Rajarshi Shahu Mahavidyalaya (Empowered Autonomous Institution), Latur, with over two decades of dedicated teaching, research supervision, curriculum design, and academic governance experience. Expert in developing modern undergraduate and postgraduate biotechnology syllabi, organizing bioinstrumentation workshops, and designing interactive e-learning courses. Qualified SET and GATE candidate with extensive postgraduate training across premier institutes including IITs, IISER Pune, and Ramanujan College, Delhi. Active contributor to institutional administration serving on the Board of Studies, Examination Committees, NIRF Committee, and Quality Assurance bodies.

20+ Years

Teaching Experience

SET & GATE

Qualified (SPPU / IIT)

Ph.D. Synopsis

Submitted (SRTMU)

Member

Board of Studies

ACADEMIC APPOINTMENT & TEACHING EXPERIENCE

Assistant Professor of Biotechnology

Rajarshi Shahu Mahavidyalaya, Latur (Empowered Autonomous Institution)

Tenure: June 2005 – Present (Current)

- Curriculum Input & Syllabi Preparation:** Developed and revised comprehensive undergraduate (B.Sc.) and postgraduate (M.Sc.) curricula across Biotechnology, Food Processing, and multidisciplinary life science programs to align with modern industry standards and NEP frameworks.
- Lecture Delivery & Pedagogical Innovation:** Delivered engaging classroom lectures engineered to encourage critical thinking, problem-solving, and active discussion among students using research-based pedagogical tools (RBPT).
- Instructional Material & E-Learning:** Prepared innovative course materials, structured lesson plans, and instructional modules. Developed the compulsory online course on 'Environmental Studies' for Third-Year (Semester V) students across all faculties.
- Research Guidance & Thesis Supervision:** Guided and supervised student research projects, thesis work, and dissertations in biotechnology, providing ongoing laboratory supervision and technical support for successful project outcomes.
- Evaluations & Examination Construction:** Constructed mid-term quizzes, terminal examinations, and open-book assessments. Graded student work and provided clear, constructive feedback to promote intellectual development.
- Workshops & Skill Enhancement:** Conducted hands-on bioinstrumentation workshops and technical seminars fostering academic development, practical skill-building, and innovative teaching practices.
- Classroom Management & Class Engagement:** Maintained an interactive and supportive learning environment, incorporating modern digital tools, distance learning technologies, and interactive learning platforms.

- **Student Advisory & Advocacy:** Advised students on higher education pathways, competitive examination preparation (GATE/NET/SET), research careers, and industry opportunities in biotechnology.
- **Departmental Governance & Quality Improvement:** Collaborated actively with departmental faculty on academic committees, assisting in developing departmental policies, accreditation documentation, and strategic academic planning.

EDUCATION & PROFESSIONAL ELIGIBILITY QUALIFICATIONS

Degree / Qualification	Specialization / Subject	Institution / University	Year
Ph.D. (Synopsis Submitted)	Muscle Physiology of Fishes & Pisciculture	Swami Ramanand Teerth Marathwada University (SRTMU), Nanded	Ongoing
SET (State Eligibility Test)	Life Sciences / Biotechnology	Savitribai Phule Pune University, Pune	05/2016
GATE 2015	Life Sciences / Biotechnology	Indian Institute of Technology (IIT), Kanpur	03/2015
GATE 2014	Life Sciences / Biotechnology	Indian Institute of Technology (IIT), Kharagpur	03/2014
PET (Ph.D. Entrance Test)	Biotechnology / Life Sciences	SRTM University, Nanded	08/2010
B.Ed.	Education / Science Pedagogy	SRTM University, Nanded	06/2003
M.Sc.	Biotechnology / Life Sciences	SRTM University, Nanded	06/2002
B.Sc.	Biological Sciences	SRTM University, Nanded	06/2000
MS-CIT	Information Technology	M.S.B. Of Technical Education, Mumbai	12/2004

RESEARCH PUBLICATIONS

1. "A Study of Physico-Chemical Parameters for Determining Fish Culture Potential in Latur District Water Bodies"
Ajanta - An International Quarterly Multidisciplinary Journal
 Volume VIII, Issue I, Part II, January - March 2019, Page No. 90-97. ISSN: 2277-5730 | Impact Factor: 5.5
2. "Feed Formulation and Optimization of Fish Feed for Different Developmental Stages of Indian Major Carps from Spawn to Marketable Size Fish Stage"
International Journal of Emerging Technologies and Innovative Research (JETIR)
 Volume 6, Issue 6, June 2019, Page No. 654-659. ISSN: 2349-5162 | Impact Factor: 5.87
3. "Converting Raw Vegetables into Value-added Products to Minimize Agricultural Losses"
Smart Solutions for Modern Food Processing Challenges, Prakash Publications
 Book Chapter | ISBN: 978-93-6342-603-0

INSTITUTIONAL GOVERNANCE & ADMINISTRATIVE RESPONSIBILITIES

- Member, Board of Studies in Biotechnology, Rajarshi Shahu Mahavidyalaya (Autonomous), Latur.
- Member, Board of Studies in Food Processing and Technology (B.Voc.), Rajarshi Shahu Mahavidyalaya (Autonomous), Latur.
- Additional Chief Superintendent (ACS) for Examinations, Rajarshi Shahu Mahavidyalaya (Autonomous), Latur.
- Member, National Institutional Ranking Framework (NIRF) Committee, Rajarshi Shahu Mahavidyalaya (Autonomous), Latur.
- Member, Value Education and Environmental Education Committee, Rajarshi Shahu Mahavidyalaya (Autonomous), Latur.
- Member & Examiner/Paper Setter, Examination Committee in Faculty of Biotechnology, Rajarshi Shahu Mahavidyalaya (Autonomous), Latur.
- Member & Examiner/Paper Setter, Examination Committee in Faculty of Biotechnology, Swami Ramanand Teerth Marathwada University, Nanded.
- Member, Annual Gathering Committee (Discipline and Cultural Activities), Rajarshi Shahu Mahavidyalaya (Autonomous), Latur.
- Member, 'Shabdagandh' Annual Publication Committee, Rajarshi Shahu Mahavidyalaya (Autonomous), Latur.
- Course Developer, Compulsory Online Course on Environmental Studies for Third Year (Semester V) students across all faculties.

PROFESSIONAL DEVELOPMENT PROGRAMMES & CERTIFICATIONS

NPTEL & Swayam MOOC Certifications (All IITs, India)

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| <ul style="list-style-type: none">• Biochemistry• Introduction to Research• Introduction to Proteomics• Biomedical Nanotechnology• Cell Culture Technologies• Animal Physiology• Bioinformatics: Algorithms and Applications• Ecology and Environment• Functional Genomics | <ul style="list-style-type: none">• Human Molecular Genetics• Experimental Biochemistry• Genetic Engineering: Theory and Applications• Introduction to Biostatistics• Plant Developmental Biology• Developmental Biology• Analytical Techniques (Swayam-MOOCs)• ARPIT: Pedagogical Innovations and Research Methodology• LaTeX101x: LaTeX for Students, Engineers, and Scientists (IIT Bombay MOOC) |
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Refresher Courses, FDPs & Specialized Technical Workshops

- **Orientation Program for Higher Education Faculty** – Ramanujan College, University of Delhi (MHRD PMMMNMTT) (26 June – 24 July 2020)
- **FDP on Open-Source Tools for Research** – Teaching Learning Center, Ramanujan College, Delhi (MHRD PMMMNMTT) (08 – 14 June 2020)
- **FDP on Entrepreneurship, Incubation and Innovation** – Teaching Learning Center, Ramanujan College, Delhi (MHRD PMMMNMTT) (23 – 29 June 2020)
- **Big Data and Precision Medicine (BDPM-2020) Workshop** – IIT Bombay, Mumbai, India (03 – 07 March 2020)
- **STEM Teacher Training Workshop on Research-Based Pedagogical Tools (Level 1)** – Sponsored by DBT, Newton Bhabha Fund (British Council) & IISER Pune (26 Feb – 01 March 2017)
- **One Week Pedagogical Training on Tools for Online Teaching Learning & Evaluation** – School of Mathematical Sciences, SRTM University, Nanded (01 – 06 July 2020)
- **Size Exclusion / Gel Permeation Chromatography Workshop** – Venture Center, Pune, India (04 February 2012)
- **Microscopy for Life Sciences Workshop** – Venture Center, Pune, India (12 – 14 January 2012)
- **6th National Workshop on Preparative & Process Chromatography and Proteomics** – ICT Mumbai & Bio-Rad Laboratories (24 – 26 August 2011)
- **Quantitative Techniques in Biodiversity Assessment** – School of Life Sciences, SRTM University, Nanded (26 – 27 February 2010)

- **National Workshop on Intellectual Property Rights (IPR) and Patents** – Rajarshi Shahu Mahavidyalaya, Latur & RGNIPM Nagpur (15 March 2021)
- **National Workshop on Good Laboratory Practices & NAAC Integration (GLPIN-2020)** – Dept. of Chemistry, Rajarshi Shahu Mahavidyalaya, Latur (30 December 2020)

CORE SKILLS & AREAS OF COMPETENCY

- **Curriculum & Pedagogy:** Curriculum Design, Syllabi Preparation, Lecture Planning & Delivery, Instructional Material Development, Classroom Engagement, Strategic Learning Tools.
- **Academic Administration:** Examinations Management, Paper Setting, Portfolio Evaluation, NIRF Committee Operations, NAAC Accreditation Workflow, Institutional Governance.
- **Research & Laboratory:** Fish Muscle Physiology, Pisciculture, Cell Culture Techniques, Gel Permeation Chromatography, Proteomics Analysis, Water Quality Assays.
- **Educational Technologies:** Distance Learning Tools, Online Course Development, LaTeX Document Processing, Research Tools, MOOC Platform Integration.