Pune District Education Association’s
Prof. Ramkrishna More Arts, Commerce and Science College, Akurdi, Pune

RESEARCH
Policy and Procedures
Contents

1. Introduction
2. Vision and Mission
3. Research Objectives
4. Guiding Principles
5. Code of Ethics in Research
6. Plagiarism Policy
7. Initiatives for research
8. Research Themes
9. Research Centres
10. Research Infrastructure

(Click on relevant item)
1. Introduction

Prof. Ramkrishna More Arts, Commerce and Science College, Akurdi, a premier College, started in 1992 by Pune District Education Association, Pune, promotes qualitative improvement in higher education in Science, Humanities and Commerce. The College aims to be a premier institution for students who succeed in a dynamic and supportive learning environment. The college recognizes the role and importance of research activity in creating new knowledge and insight, and imparting enthusiasm and dynamism to the educational process.

The College has developed perspective plan 2015-20. Within this plan attention is given towards research activities in the college. To enhance the research activities, the plan on the basis of perspective plan is devised by IQAC.

2. Vision and Mission

**Vision:** The College is to become a leading centre for innovative and collaborative research through knowledge and scientific discoveries.

**Mission:** To foster relevant research in scientific, humanities and commerce disciplines and to excel in research and creative activities that develops knowledge and contributes to the socio-economic growth of the region. The college provides the resources, infrastructure, leadership and training to promote quality research by adhering to the highest ethical responsibility, integrity and professional best practices in all aspects of research.

3. Research Objectives

To fulfill the vision for research, the college has identified the following major research objectives and strategies.

**Objectives**

Prof. Ramkrishna More Arts, Commerce and Science College, Akurdi will build on its strengths to manage a research environment which will:

- Endorse /Promote rigorous research and innovation that is relevant to the nation and the society.
- Motivate /Encourage, foster, promote and sustain excellence in research of all faculties aspects.
- Enhance existing research areas and develop expertise in emerging fields.
- Facilitate multidisciplinary research.
- Provide facilities to research scholars who are pursuing their research degrees.
- Expand outreach efforts to develop collaborations and strategic, durable research partnerships with other research institutes and industry sectors for steering, funding and cooperation.
- Develop a suitable enabling research infrastructure and to provide research framework and guidelines to faculty, research scholars and students.
- To make aware and encourage the generation of intellectual capital.
- To ensure integrity, quality and Code of ethics in research
- To inspire socially useful research with potential for commercialization.

**Strategies**

In order to strengthen Research culture following activities are proposed:

- Involvement of students in research activities.
- To apply for major / minor research projects to UGC, University and Other Funding Agencies.
Establishment new research centers and strengthening of the existing ones.
Organization of training workshops for teachers.
Establishment of a multidisciplinary research Centre with central equipment facility.
 Provision of funding support for purchase of research equipment.
Encouragement to faculty and students to attend national/international conferences.
Organization of national/international conferences.
Development of linkages with reputed industries and institutions.
Encouragement for Research paper publication.
Emphasize on collaborative research.
 Provision of incentives to promote quality research outcomes

4. Guiding Principles
The following guiding principles illustrate College dedication to the quest of research excellence. At Prof. Ramkrishna More Arts, Commerce and Science we believe that all forms of research outputs affect society, directly or indirectly by underpinning the advancement of knowledge, and can be expressed as social, economic, environmental, or cultural benefits.

The guiding principles are

- Engaging students in research activities provides unique and relevant contextual learning and builds their research skills.
- Generate ideas to pursue both curiosity-driven and solution-based research to address recent fields.
- Innovations in scientific, social and pedagogical areas through the development of new technologies.
- Research inspires creativity, inculcates scientific temper and supports the socio-economic, cultural development of the community.
- Research and teaching-learning are intrinsically linked and complementary.
- Research engagement supports professional development of faculty and helps them in curriculum development.
- Multidisciplinary research is a learning experience in which the researchers also learn from each other’s fields.

5. Code of Ethics in Research
Code of ethics in research involves the application of fundamental ethical principles to be followed in research activities, including scientific research. Research, education and extension are integral parts of any higher education institute. The reputation of institution depends on quality of research and education. NAAC gives substantial weightage to quality and quantity of research undertaken by faculty and students of the Institute. UGC as well as Savitribai Phule Pune University expect certain ethics followed by institution in their research activities. To fulfill these expectations Prof. Ramkrishna More Arts, Commerce and Science College, Akurdi with deliberation with researchers and worldwide ethics followed has formulated certain code of ethics for research in the college. These codes are

**Responsibilities of a Research Investigator:** A research investigator or guide must not only put together the research students but also try to assemble an adequate financial and administrative structure to support the research. A supervisor not only provides guidance and advice to individual students in the research but also make them aware of responsibility for the scientific integrity of the whole research activity.
Data and report: Research guide should take all reasonable steps to check the details of experimental procedures and the validity and authenticity of the data or observations reported by research scholars, including periodic reviews of primary and secondary data as well as reports prepared by scholars. The report of research outcome must be based on accurately recorded data or observations. It will be considered as a breach of research integrity if the reported data fail to support the reported conclusions. The data must be authentic and be based on outcome of original activities of researcher and not from other sources. Any intentional or reckless disregard for the truth in reporting observations may be considered to be an act of research misconduct.


Ethical policy of UGC on dissection of animals: Every researcher must follow ethical policy on animal dissection given by UGC.

Originality and acknowledgement of sources: The research work that must be original and come from research outcome of researchers. If help is taken from other sources, should be acknowledged properly.

Duplication of Publication: Research articles must be published in UGC notified journals. Researchers should not publish the same research outcome in two different places. If published very good reason must be given and appropriate citation must be made in the later publication to the earlier one and if required, the editor must be explicitly informed.

Disclosure and conflicts of interest: Researchers may use Institution resources such as staff, equipment, information or confidential information with prior permission of Principal or head of the department. Researchers may not use Institution resources for any purpose other than purposes related to teaching, research or service by the Institution, unless prior permission has been obtained by the head of the department and/or the Principal.

6. Plagiarism Policy

We follow the plagiarism policy decided by UGC and Savitribai Phule Pune University, Pune. This policy is given in following link.
http://unipune.ac.in/administration_files/pdf/Plagiarism_Policy_University_14-5-12.pdf

The college research committee aware researchers about these policies.

Prof. Ramkishna More Arts, Commerce and Science College has formed Institutional Academic Integrity Panel (IAIP) and department wise Departmental Academic Integrity Panel (DAIP) according to the guidelines mentioned in Savitribai Phule Pune University circular No. 175/208, UGC notification F. 1-182010 (CPPP-II) dated 23/7/2018. These panels have right to check plagiarism and all related issues before submission M. Phil./Ph.D. Thesis, Publication of research paper, etc.

7. Initiatives for research

The authorities of the parent body: Pune District Education Association, LMC, Principal and IQAC of the Prof. Ramkrishna More Arts Commerce and Science College, Akurdi, Pune (affiliated to S. P. Pune University) keenly involved and proactive to promote research culture amongst the faculty
and students. College has a research coordination committee which along with the IQAC looks after all the requirements for the research work carried out in the college. The committee has recommended few reforms such as providing seed money for research work, improvement of existing research facilities, purchase of instruments as well as journals and books, besides publish research compendium for inculcating research culture in college.

a) IQAC encourages every department of the college to submit project proposals to funding agencies. The teachers are encouraged to take up research projects and provided support for applying to different funding agencies as well as for effective implementation of the sanctioned research projects. College facilitates timely auditing and submission of utilization certificate to the funding authorities.

b) Research ambiance is upholding via establishing the linkages and collaborations with academic and research institutes.

c) College is attentive for starting as well as smooth running of the recognized research centres in respective departments by fulfilling all administrative procedures as per SP Pune University norms for maintaining the research culture.

d) College has taken efforts for submitting the proposals to various funding agencies including UGC, SPPU, DBT and DST. As a result, college has been sanctioned DBT-STAR (4 lakhs) and DST-FIST schemes (88 lakhs). These funds were properly utilized for upgrade the research facilities as per the norms of funding agencies and also inculcating scientific culture in the campus.

e) College has formed the committee as per UGC and SPPU’s guidelines for following proper code of ethics.

f) College has the ethical committee to handle ethical issues and not to inflict injury or pain on animals.

g) College also provides all the infrastructural support as well as seed money to faculty members for conducting research.

h) College aids the faculty, research scholars and project students for their research analysis and guidance from various reputed national institutes, industries and universities.

i) College research coordination committee governs the day to-day research requirements for the smooth functioning of research endeavors.

j) College encourages and sponsor the faculty as well as students to attend research events and to publish research articles in peer reviewed journals.

k) College also organizes scientific events viz. conferences, seminars and workshops to acquire updated knowledge and skill of the researchers. Regular lectures of well-known experts are arranged and staff and students are stimulated to interact with them.

l) Teachers are encouraged and motivated by the IQAC to undertake research activities like projects and participation in AVISHKAR.

m) The college felicitates achievers in the research field. FIP, duty leave for presenting research papers, attending workshops, etc. are provided. College promotes the faculty as well as students to attend conference, seminars; encourage them to publish research articles.

n) College organizes scientific events viz. conferences, seminars and workshops to provide sound platform to researchers of the college to update their skills, present their findings and interact with external experts and participants.

o) Students sent to National Research Centres like C-MET, NCL for completing their research projects.
p) The college IQAC take keen interest and efforts in sensitizing the students and faculty members for developing a research environment in the college. The students are encouraged towards learning-by-doing and hands-on-approaches and accordingly various programs are arranged on campus.

q) Various activities including ‘Science Exhibition’, workshop on ‘Research Methodology’ are organized regularly by the college.

r) Adequate support is always provided for the consultancy and Collaboration

**The efforts made by the committee shown beneficial results, such as:**

i. College has recognized research centers in 9 departments

ii. In the last four years, 22 minor research projects have been completed and 10 are ongoing.

iii. Notable increase in the number of national and international conferences /seminars/and workshops organized by the institute, research publications in reputed research journals and faculty participation in conferences and seminars.

iv. Laboratory facility up-gradation.

v. Computer and internet facility are provided to all departments.

vi. LCD projectors, smart boards, interface experiments and sensors are purchased.

### 8. Research Themes

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of the M.Phil/Ph.D. guide</th>
<th>Name of the department</th>
<th>Research details</th>
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<tbody>
<tr>
<td>1</td>
<td>Prin. Dr. M. G. Chaskar</td>
<td>Chemistry</td>
<td>Nano material and application to photocatalytic dye degradation</td>
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<td>2</td>
<td>Dr. Suresh Rasale</td>
<td>Chemistry</td>
<td>Synthesis of new coordination compound and study their biological activity</td>
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<td>3</td>
<td>Dr. R. A. Pawar</td>
<td>Chemistry</td>
<td>Synthesis of Nano material and its application for dye degradation</td>
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<td>4</td>
<td>Dr. Kisan Gadhav</td>
<td>Chemistry</td>
<td>studies on preparation and characterization of mixed metal sulphide pallets&amp; their use in photoelectric chemical</td>
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<td>5</td>
<td>Dr. D. R. Shinde</td>
<td>Chemistry</td>
<td>Synthesis, characterization and application of ZnO and doped ZnO for dye degradation under solar irradiation</td>
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<td>6</td>
<td>Dr. P. S. Tambade</td>
<td>Physics</td>
<td>Material Science, Computational Physics and Physics Education</td>
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<td>7</td>
<td>Dr. B. M. Shinde (MPhil)</td>
<td>Botany</td>
<td>Plant Stress physiology</td>
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<td>8</td>
<td>Dr. P. B. Cholke</td>
<td>Botany</td>
<td>Aerobiology</td>
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<td>9</td>
<td>Dr. Varsha Shriram</td>
<td>Botany</td>
<td>Natural Products and Bioactivities, Antimicrobial Resistance, Metabolic engineering, Medicinal plants, plant Biotechnology</td>
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<td>10</td>
<td>Dr. H. B. Sonawane</td>
<td>Botany</td>
<td>Fungal Biotechnology, Mycology and Plant Pathology</td>
</tr>
<tr>
<td>Name of researcher</td>
<td>Subject</td>
<td>Research Areas</td>
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<tr>
<td>DR. M. G. Chaskar</td>
<td>Chemistry</td>
<td>Material Science, Computational Physics and Physics Education</td>
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<tr>
<td>Dr. P. S. Tambade</td>
<td>Physics</td>
<td>Design and implementation of microcomputer based laboratory in understanding of laws kinematics to undergraduate students.</td>
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<tr>
<td>Rane Madam</td>
<td>Physics</td>
<td>Synthesis of new coordination compound and study their biological activity</td>
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<td>Rasal sir</td>
<td>Chemistry</td>
<td>studies on preparation and characterization of mixed metal sulphide pallets&amp; their use in photoelectric chemical</td>
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<tr>
<td>K.M. Gadave</td>
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<tr>
<td>Dr. H. B. Sonawane</td>
<td>Botany</td>
<td>Plant physiology and environmental science</td>
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<tr>
<td>Dr. B. M. Shinde</td>
<td>Botany</td>
<td>Stress physiology</td>
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**Research Policy**  Prof. Ramkrishna More Arts, Commerce and Science College, Akurdi
<table>
<thead>
<tr>
<th>Mr. Kishor Saste</th>
<th>Botany</th>
<th>Plant Taxonomy</th>
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<td>Dr. Dangat</td>
<td>Economics</td>
<td>Banking, Socio-economic issues, Export Import policies, International economics, Industrial economics</td>
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<td>Dr. Lobo B. G.</td>
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<td>Agriculture, Applied economics</td>
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<td>Dr. Chaudhari M. K.</td>
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<td>Demography, Indian economy,</td>
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<td>Vidula Vayvhare</td>
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<td>Santosh Wadhwankar</td>
<td>Economics</td>
<td>Indian economy, Poverty, Human development Index, Agriculture</td>
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<tr>
<td>Dr. Sarika Mohol</td>
<td>Economics</td>
<td>Indian economy, Public finance</td>
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<tr>
<td>Dr. D.B. Chavan</td>
<td>Economics</td>
<td>Export Import policies, International economics, Industrial economics</td>
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<tr>
<td>Dr. Shilpagauri Ganpule</td>
<td>English</td>
<td>English Language Teaching</td>
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<td>Dr. Manjusha Dhumal</td>
<td>English</td>
<td>Eco-Criticism</td>
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<tr>
<td>Dr. Tushar Shitole</td>
<td>Geography</td>
<td>Coastal Geomorphology</td>
</tr>
<tr>
<td>Dr. Savita Kulkarni</td>
<td>Geography</td>
<td>Fluvial Geomorphology</td>
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</tbody>
</table>

9. Research Centers

Poona District Education Association’s Prof. Ramkrishna More Arts, Commerce and Science College, Akurdi, Pune-44, has following Recognized Research Center by S. P. Pune University

1. Economics Department
2. Hindi Department
3. English Department
4. Geography Department
5. Commerce Department
6. Botany Department
7. Zoology Department
8. Physics Department
9. Chemistry Department

10. Research Infrastructure

College has well equipped laboratories for the Science faculty and Computer Science faculty. Attention has been given to upgrade the existing facilities and to build up new facilities by financial contribution by the college as well as funds received from various funding agencies including DST, DBT and Industry partners. These consistent and focused efforts result in to the creation of Central facility with sophisticated laboratories for material Science, life science and food Science with well support of quality equipment. There are high end equipment including DTA-TGA system, Atomic Absorption Spectrophotometer, UV-visible spectrophotometer, Polymerase chain reaction Machine, Microtome, cooling centrifuge, Tissue processor, Laminar airflow, Incubator
Shaker, Trinocular inverted Microscope, Gel electrophoresis system, Sprayer Pyrolysis, Linear air track with Vernier, Einstein MATLAB, LabVIEW available to the researcher at the college. College also has supported the departments in Commerce and Arts faculty as well. Pains has been taken to develop language lab in English Department, Geography and Psychology departments have well equipped labs with the facilities for soil testing and GIS.

Computer Science departments has computer labs with latest version of computer systems. All the departments are provided required computers and are regularly upgraded and maintained so that to support and smooth functioning of research activities. As per the increasing demand from the respective departments college has procured the new machines by regular purchase of it.

College has provided the internet facility to all the departments for updating the recent developments in the respective field. Additionally, facilities such as INFLIBNET, AMRITA are made available to the faculty and students for thorough referencing that is the integral part of the research.

College library is well-resourced by research journals and reference books so that to facilitate update the knowledge of the staff as well as the students. Every year purchase of the research journals and reference books is done for regular update of the library facility.

College always attempted to collaborate with Research institutes and Industry to do quality research, to avail the latest facilities and to expand the horizon in the field of research.

Formulated: June 2014
Revised : April 2018