

## Research & Development Policy of Osmania University

### *Preface*

In the ever-evolving landscape of higher education and research, Osmania University in Hyderabad, Telangana, India, stands as a beacon of intellectual pursuit and societal advancement. Our institution's commitment to research excellence and the relentless pursuit of knowledge is enshrined in this Research Policy Document. The policy serves as a compass, guiding all the stakeholders in their endeavors to advance knowledge, foster innovation and contribute to the welfare of the humanity.

At Osmania University, research is not merely a task but a sacred responsibility. This policy is a testament to our unwavering dedication to nurturing a research culture that adheres to the highest ethical standards, encourages interdisciplinary collaboration, and provides the support and infrastructure necessary for innovation to flourish.

We recognize that research extends beyond the confines of academia, reach out to the broader community and address the pressing challenges of our times. Through the Research Policy, we underscore our commitment to ethical conduct, transparency and responsible research practices that drive tangible positive change in the society.

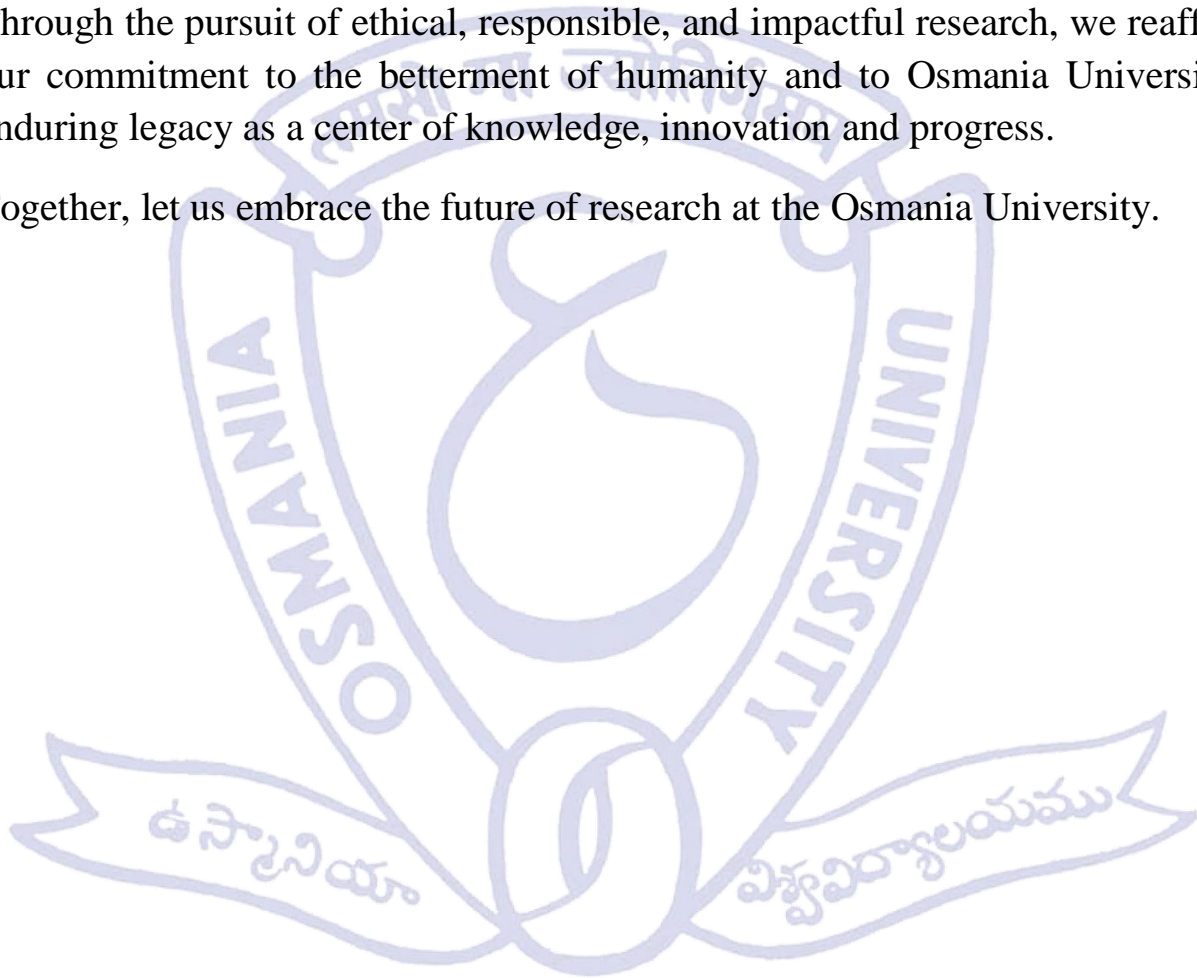
In this document, you will find comprehensive guidelines that focus upon diverse aspects of research, from the humane treatment of animals to the protection of intellectual property. These guidelines reflect our commitment to not only conducting research but doing so with utmost integrity, accountability and respect for all the stakeholders involved.

As we embark on this collective journey of research excellence, we are reminded that it is the dedication of our faculty, students, staff and partners that truly fuels our mission. Together, we aspire to create a research ecosystem that empower, innovate and contribute to the advancement of the mankind.

This Research Policy Document is not static; it is a living framework that will evolve with the changing research landscape and emerging best practices. It is our shared responsibility to uphold the principles that are present in this policy and to continuously strive for research that not only pushes the boundaries of knowledge but also has a profound impact on the society.

Through the pursuit of ethical, responsible, and impactful research, we reaffirm our commitment to the betterment of humanity and to Osmania University's enduring legacy as a center of knowledge, innovation and progress.

Together, let us embrace the future of research at the Osmania University.



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<b>Purpose of this Policy:</b>		
<p>The Research Policy of Osmania University is designed to provide a comprehensive framework for conducting research that adheres to ethical standards, fosters collaboration, and promotes impactful contributions to society. It outlines the principles and guidelines that govern research activities within the institution, with a focus on responsible conduct, ethical considerations, and a commitment to advancing knowledge and societal welfare. This policy serves as a guiding document to ensure that research at Osmania University upholds the highest standards of integrity, excellence, and relevance, thereby contributing to the betterment of society and the advancement of knowledge.</p>		

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## Research & Development Policy of Osmania University

### 1. Preamble

In the corridors of academia, where the pursuit of knowledge intertwines with the quest for societal transformation, Osmania University, nestled in the heart of Hyderabad, India, emerges as a distinguished seat of higher learning. It stands as a testament to the transformative power of education, research and innovation, where the synergy of intellect and inquiry is celebrated. With unwavering commitment and relentless dedication to the betterment of humanity, Osmania University presents its Research Policy – a guiding beacon illuminating the path to responsible, ethical and impactful research.

This preamble sets the stage for the Research Policy of Osmania University, a profound testament to our vision and ethos. It is here that we uphold the principles of research excellence, ethical conduct, collaboration and innovation. We understand that research transcends the confines of our institution, reverberating through society's complex tapestry, addressing its multifaceted challenges and shaping a brighter future.

Osmania University cherishes research as not just a pursuit but as a solemn duty, marked by integrity, transparency and the highest standards of ethics. It champions a research culture that spans disciplines, encourages interdisciplinary endeavours and provides a nurturing environment for the seeds of innovation to germinate and flourish.

Our commitment extends to the principles of responsible conduct, the humane treatment of animals and the protection of intellectual property. We endeavour to create an ecosystem where research does not just exist but thrives with purpose, accountability and respect for all participants.

We understand that the impacts of research are felt far beyond the walls of our institution. Through this policy, we reaffirm our pledge to serve society, catalysing progress and shaping a better future for all. We stand at the cusp of

discovery and endeavour to pursue knowledge that resonates with integrity, accountability and societal relevance.

The pages of this Research Policy Document encapsulate the ideals and aspirations of Osmania University – a commitment to ethical, responsible, and transformative research. It underscores our belief that research is not merely a task but a shared responsibility and an act of service to the community.

As we traverse this journey of intellectual inquiry and societal advancement, we acknowledge that it is the collective dedication of our faculty, students, staff, and partners that propels us forward. Together, we aspire to create an inclusive, innovative, and collaborative research ecosystem – a testament to Osmania University's enduring legacy as a bastion of knowledge, innovation and societal progress.

## 2. **Research Objectives**

- a) To promote high-quality research across all disciplines and areas of study at the University.
- b) To develop and maintain a vibrant research culture that fosters innovation, creativity, and excellence.
- c) To encourage interdisciplinary and cross-disciplinary research collaborations that address complex real-world problems.
- d) To support and nurture emerging areas of research that have the potential to make significant contributions to society.
- e) To attract and retain the best talent in research and provide them with the necessary resources and infrastructure to excel in their work.
- f) To ensure that all research activities are conducted with the highest standards of ethical conduct and integrity.
- g) To promote internationalization and global engagement in research and to foster collaborations with leading research institutions around the world.

- h) To contribute to the development of new knowledge, technologies, and innovations that has the potential to improve the quality of life of people in our region and beyond.
- i) To disseminate research findings widely through publications, conferences, and other platforms and to ensure that the research outcomes have real-world impact.
- j) To provide a supportive and inclusive research environment that promotes diversity, equity, and inclusion in all aspects of research activities in a timely manner.

### 3. Guidelines for Protection of Animal Subjects in Research:

- a) **Justification and Approval:** The use of animals in research must be justified based on scientific merit, and approved by the Institutional Animal Ethics Committee (IAEC) of the University.
- b) **Care and Welfare:** The animals used in research must be housed, fed, and cared for in accordance with the guidelines of the Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA) and the IAEC, to ensure their welfare and well-being.
- c) **Minimization of Pain and Distress:** All efforts must be made to minimize pain and distress to animals used in research, including the use of appropriate anesthesia, analgesia, and other measures.
- d) **Alternatives to Animal Use:** Researchers should explore alternative methods of research that do not require the use of animals whenever possible, and should only use animals when no alternatives are available.
- e) **Replacement, Reduction, and Refinement:** The 3Rs principle of Replacement, Reduction, and Refinement should be followed in all animal research activities, to minimize the number of animals used, reduce the impact on animals, and refine the methods to minimize suffering.

- f) **Training and Certification:** Researchers and animal handlers involved in animal research must be appropriately trained as evidenced by research publications and certified by recognized agencies to ensure they have the knowledge and skills necessary to care for and handle animals humanely.
- g) **Record Keeping and Reporting:** Detailed records of animal use and welfare must be maintained, and regular reporting to the IAEC and CPCSEA must be done to ensure compliance with guidelines and regulations.
- h) **Oversight and Compliance:** The IAEC must provide regular oversight and monitoring of animal research activities to ensure compliance with guidelines and regulations, and to ensure that animals are being used in accordance with the approved protocol.
- i) **Accountability:** Researchers must be held accountable for any violations of guidelines and regulations related to animal research, and appropriate penalties should be imposed for non-compliance.

#### 4. Guidelines for Ethical Conduct of Researchers:

- a) **Honesty and Integrity:** Researchers must maintain honesty and integrity in all aspects of research, including data collection, analysis, reporting, and dissemination.
- b) **Objectivity and Fairness:** Researchers must strive to maintain objectivity and fairness in research, and avoid bias, conflicts of interest, and discrimination.
- c) **Informed Consent:** Researchers must obtain informed consent from human participants in research, and ensure that participants understand the purpose, risks, and benefits of the research, and their right to withdraw at any time.
- d) **Privacy and Confidentiality:** Researchers must protect the privacy and confidentiality of human participants in research, and

ensure that their personal information is kept confidential and not disclosed to unauthorized parties.

- e) **Research Design and Methods:** Researchers must design and conduct research in accordance with the principles of good research practice, and ensure that research methods are appropriate, valid, and reliable.
- f) **Data Management and Sharing:** Researchers must ensure that research data are managed appropriately, and shared in accordance with ethical and legal guidelines, to ensure the integrity and transparency of research.
- g) **Publication and Authorship:** Researchers must ensure that research publications accurately reflect the contributions of all authors avoid plagiarism, duplicate publication, and other forms of scientific misconduct.
- h) **Collaboration and Teamwork:** Researchers must promote collaboration and teamwork in research, and respect the contributions of all members of the research team.
- i) **Oversight and Compliance:** The University must establish mechanisms for oversight and compliance with ethical standards in research, and ensure that researchers are aware of and comply with ethical guidelines and regulations. The University must resolve any matters of research proposals, permissions for the clearance of ethical, financial, institutional and departmental issues for conduct of research in a timely manner. For any delays in permissions/clearances, the matter should be escalated to the Vice Chancellor.
- j) **Ethics Training:** The University must provide regular training in research ethics to researchers, to promote ethical conduct in research and prevent research misconduct.



## 5. Guidelines for the Prevention of Research Misconduct:

**Definition:** Research misconduct is defined as the fabrication, falsification, plagiarism, or other forms of any deviation from ethical research practices that are committed intentionally, knowingly, or recklessly, and that could lead to false, misleading, or erroneous research results.

- a) **Prohibited Conduct:** The following types of conduct are prohibited and considered as research misconduct:
  - i. **Fabrication:** making up data or results that were not actually generated
  - ii. **Falsification:** manipulating research data or results to misrepresent the truth
  - iii. **Plagiarism:** using someone else's work, ideas, or words without proper attribution or permission
  - iv. **Misrepresentation:** presenting research findings or credentials falsely or deceptively
  - v. **Failure to Follow Ethical Guidelines:** failing to follow ethical guidelines for research conduct and reporting
  - vi. **Other Forms of Deviation:** any other forms of deviation from ethical research practices that are considered unacceptable by the University
- b) **Reporting and Investigation:** Any person who suspects or has evidence of research misconduct must report it to the appropriate authorities, who will investigate the allegations and take appropriate action if misconduct is found.
- c) **Protection of Whistle-blowers:** The University will protect whistle-blowers who report research misconduct in good faith, and ensure that they are not subjected to retaliation or reprisals.
- d) **Consequences of Research Misconduct:** Researchers found guilty of research misconduct will face disciplinary action, including but not limited to retraction of publications, suspension or termination of

research grants, loss of academic degrees or positions, and legal sanctions.

- e) **Appeals Process:** Researchers who are accused of research misconduct have the right to appeal the decision and have their case reviewed by an independent panel.
- f) **Training and Education:** The University will provide regular training and education in research ethics and the prevention of research misconduct to all members of the research community, including researchers, students, and staff.

## 6. Guidelines for Data Management:

- a) **Purpose:** The purpose of these guidelines is to ensure that research data are managed in a secure, reliable, and ethical manner, to promote the integrity and transparency of research.
- b) **Data Management Plan:** Researchers must develop a data management plan for their research, which should include the following elements:
  - i. Description of data to be collected, including format, type, and source
  - ii. Methods for collecting, storing, and processing the data
  - iii. Procedures for ensuring data quality and reliability
  - iv. Plans for sharing data, including with whom and under what conditions
  - v. Plans for preserving data for long-term access and use
- c) **Data Collection:** Researchers must collect data in accordance with the data management plan, using appropriate methods and tools, and ensuring that the data is accurate, complete, and reliable.
- d) **Data Storage:** Researchers must store data securely and confidentially, using appropriate storage media and backup procedures, and ensuring that data is accessible only to authorized personnel.

- e) **Data Processing:** Researchers must process data using appropriate methods and tools, and ensure that data are analysed and interpreted in an objective and transparent manner.
  - f) **Data Sharing:** Researchers must share data with other researchers, subject to ethical and legal guidelines, and ensure that data is made available in a timely and transparent manner.
  - g) **Data Preservation:** Researchers must preserve data for long-term access and use, using appropriate preservation methods and standards, and ensuring that data is stored in a secure and accessible manner.
  - h) **Data Retention:** Researchers must retain raw and curated data for a minimum period of 10 years from the completion of project or publication, in accordance with ethical and legal guidelines, and ensure that data are securely disposed of when no longer needed.
  - i) **Data Ownership:** Researchers must respect the rights of data owners, and ensure that data is used only for the purposes for which they were collected, and with the consent of the data owner.
  - j) **Data Management Training:** The University will provide training and support to researchers on data management best practices, and ensure that researchers are aware of and comply with data management guidelines and regulations.
7. **Guidelines for Research Integrity Training:**
- a) **Purpose:** The purpose of these guidelines is to ensure that all members of the research community at Osmania University understand the principles of research integrity and are trained to conduct research in an ethical and responsible manner.
  - b) **Scope:** These guidelines apply to all researchers, students, and staff engaged in research at Osmania University.
  - c) **Training Requirements:** All researchers, students, and staff engaged in research must complete research integrity training as a

condition of their appointment, admission, or enrolment. The training should cover the following topics:

- i. Definition and importance of research integrity
  - ii. Ethical principles and guidelines for research conduct, including those related to research design, data collection, analysis, reporting, and dissemination
  - iii. Standards for responsible research practices, including those related to authorship, peer review, conflict of interest, and collaboration
  - iv. Consequences of research misconduct and violations of research integrity
- d) **Training Providers:** The University will provide research integrity training through a variety of methods, including online courses, workshops, seminars, and mentoring programs. The training will be provided by qualified trainers who have expertise in research integrity and related fields.
- e) **Evaluation of Training:** The University will evaluate the effectiveness of the research integrity training program and make improvements as necessary to ensure that it meets the needs of the research community.
- f) **Certification of Training:** Researchers who complete research integrity training will receive a certification of completion, which they must maintain and provide upon request.
- g) **Integration with Research Governance:** The research integrity training program should be integrated with other aspects of research governance, such as policies on data management, research misconduct, and ethical conduct of research.

## 8. Guidelines for Research Funding:

- a) **Purpose:** The purpose of these guidelines is to ensure that research funding at Osmania University is allocated and managed in a transparent, equitable, and effective manner, to support high-quality

research that advances knowledge and contributes to societal welfare.

- b) **Funding Sources:** Researchers at Osmania University may receive research funding from a variety of sources, including government agencies, private foundations, industry partners, and philanthropic donors.
- c) **Funding Eligibility:** Researchers who wish to receive research funding must meet the eligibility criteria specified by the funding source, and must comply with the policies and guidelines governing the use of the funds.
- d) **Proposal Preparation:** Researchers must prepare a research proposal that clearly articulates the research objectives, methodology, expected outcomes, and budget, and must comply with the format and submission requirements specified by the funding source.
- e) **Proposal Review for institutional projects:** Research proposals will be reviewed by an independent review panel, which will evaluate the scientific merit, feasibility, and potential impact of the proposed research, as well as the qualifications and track record of the researchers.
- f) **Funding Decisions for institutional projects:** Funding decisions will be based on the results of the proposal review, and will take into account the availability of funds, the priority areas of the funding source, and the strategic priorities of Osmania University.
- g) **Funding Management:** Researchers who receive research funding must manage the funds in accordance with the policies and guidelines of the funding source and Osmania University, and must report regularly on the progress and outcomes of their research.
- h) **Intellectual Property:** Researchers must comply with the intellectual property policies of the funding source and Osmania University, and must ensure that any intellectual property arising

from their research is appropriately protected and exploited for the benefit of society.

- i) **Ethics and Compliance:** Researchers must conduct their research in accordance with ethical and legal standards, and must comply with all relevant regulations governing the conduct of research.
- j) **Training and Support:** The University will provide training and support to researchers on research funding best practices, and will ensure that researchers are aware of and comply with funding policies and regulations.
- k) **Management and sharing of resources of institutional projects and retired faculty:** To maximize the utilization of instrumentation by students and faculty, the equipment and computers that were acquired from institutional or umbrella projects as well as those belonging to the retired faculty have to be transferred immediately to a central instrumentation facility within each department/institute. The existing facilities have to be detailed on the department website and these facilities may be extended to the researchers of other departments also.

## 9. Guidelines for Intellectual Property Rights

- a) **Purpose:** The purpose of these guidelines is to ensure that the intellectual property rights of researchers at Osmania University are protected, and that the results of their research are appropriately commercialized and disseminated for the benefit of society.
- b) **Ownership of Intellectual Property:** Researchers at Osmania University will retain ownership of the intellectual property arising from their research, subject to any agreements with funding sources or collaborators.
- c) **Disclosure of Intellectual Property:** Researchers must disclose any intellectual property arising from their research to the University's

technology transfer office, and must cooperate with the office to protect and commercialize the intellectual property.

**Protection of Intellectual Property:** The University will take appropriate measures to protect the intellectual property of researchers, including filing patent applications, registering trademarks, and maintaining confidentiality of trade secrets.

- d) **Commercialization of Intellectual Property:** The University's technology transfer office will work with researchers to identify potential commercialization opportunities for their intellectual property, and will negotiate licenses and other agreements with industry partners and other stakeholders.
- e) **Dissemination of Intellectual Property:** Researchers are encouraged to disseminate the results of their research through publications, presentations, and other means, subject to any confidentiality or non-disclosure obligations.
- f) **Intellectual Property Sharing:** Researchers are encouraged to share their intellectual property with other researchers and stakeholders in order to advance knowledge and promote innovation, subject to any legal or contractual obligations.
- g) **Attribution and Authorship:** Researchers must ensure that they are appropriately attributed and credited for their contributions to any intellectual property arising from their research, and must comply with ethical standards for authorship in publication.
- h) **Training and Support:** The University will provide training and support to researchers on intellectual property best practices, and will ensure that researchers are aware of and comply with intellectual property policies and regulations.
- i) **Resolution of Disputes:** Any disputes related to intellectual property ownership or commercialization will be resolved through the University's established dispute resolution mechanisms.

## 10. Guidelines for Collaboration and Partnership:

- a) **Purpose:** The purpose of these guidelines is to encourage and facilitate collaboration and partnership between researchers at Osmania University and external organizations, in order to advance knowledge and promote innovation.
- b) **Types of Collaboration and Partnership:** Collaboration and partnership may take many forms, including research consortia, joint research projects, industry partnerships, technology transfer, and other forms of collaboration.
- c) **Criteria for Collaboration and Partnership:** Collaboration and partnership should be based on common interests and goals, and should contribute to the advancement of knowledge and the promotion of societal welfare. Partnerships should be governed by clear agreements that specify the roles, responsibilities, and expectations of the partners.
- d) **Intellectual Property Rights:** Intellectual property rights arising from collaborative research or partnerships should be governed by clear agreements that specify the ownership, management, and commercialization of the intellectual property.
- e) **Funding and Resource Sharing:** Collaborative research or partnerships may involve the sharing of funding, equipment, facilities, or other resources, and should be governed by clear agreements that specify the terms and conditions of the sharing.
- f) **Ethical and Legal Considerations:** Collaborative research or partnerships should be conducted in accordance with ethical and legal standards, and should comply with all relevant regulations governing the conduct of research.
- g) **Data Sharing and Management:** Collaborative research or partnerships may involve the sharing and management of data, and should be governed by clear agreements that specify the ownership, access, and use of the data.



- h) **Confidentiality and Non-Disclosure:** Collaborative research or partnerships may involve the sharing of confidential or proprietary information, and should be governed by clear agreements that specify the confidentiality and non-disclosure obligations of the partners.
- i) **Conflict Resolution:** Any conflicts or disputes arising from collaborative research or partnerships should be resolved through established dispute resolution mechanisms.
- j) **Training and Support:** The University will provide training and support to researchers on collaboration and partnership best practices, and will ensure that researchers are aware of and comply with collaboration and partnership policies and regulations.

