

Code of ethics in research

Research is an essential and organized inquiry conducted in pursuit of truth. Engaging in quality research and honest dissemination of its results, is therefore, researchers' moral and social responsibility.

The code of ethics adopted by SIES College of Arts, Science and Commerce (Autonomous) describes the ethical standards of conduct expected from faculty, research scholars and students while conducting and publishing research.

This ethics code is drafted based on the guidance book released by the University Grants Commission (UGC) ("Academic Integrity and Research Quality") as an initiative of 'Quality mandate' to improve the quality of research and to promote academic and research integrity and publication ethics in Indian higher education institutes and universities.

The principles:

Honesty in developing, undertaking, supervising, reviewing, reporting, and communicating research in a transparent and just way.

Reliability by ensuring the quality of research through integrity, meticulousness, high standards and accuracy in designing, conducting, analysing, and reporting.

Accountability for the research from ideation to communication, resource and financial management, mentoring and supervision, and impact on society and environment.

Respect and care towards contributing colleagues, research participants, research subjects, resources, and the environment.

Legality- that is knowing and following laws and government and institutional policies related to the conduct and publication of research, and accessing research resources, particularly in relation to copyright, intellectual property rights and patents.

Objective:

This code of ethics in research aims to attain high standards and excellence in research by ensuring scientific integrity and best practices during conduct and dissemination of research. The institute, through the ethics policy, envisions a conducive environment to promote honest, responsible, accountable, and fair indulgence of all its stake holders in scientific and scholarly research.

Norms to be followed:

The code of ethics shall apply to research project proposals, project reports, dissertations, research papers or review articles, and book or chapter publications in natural, biological and social sciences and the humanities. Researchers must practice intellectual honesty and research integrity in data collection, ideation, conducting, reporting, and communicating research. Research supervisors' role and responsibility is crucial in every stage of study.



1. Research Data collection:

- Researcher should collect data with accepted principles, clear methods, and reliable practices.
- An informed consent should be obtained from the study population.
- The method and purpose of data collection should be described in the study report.
- All primary and secondary data should be stored in secure and accessible form.
- Researcher should maintain detailed and complete records of the research undertaking.

2. Research Procedures:

- Researcher should design, plan and conduct research with accepted principles, clear methods, and reliable practices to avoid waste of resources and futile exposure of people to risk.
- Integrity, meticulousness, and accuracy should be maintained in conducting research and in evaluating, recording, and presenting results.
- The researcher should be committed to completion of research work that is proposed while applying for funding.
- The sources of funding and other associations should be declared to all the participants of the research team and to public.
- The researcher should be fair and honest in utilisation of grant money and maintain an account book for the grant or funding received.
- The study should be conducted with minimum impact on the environment and efficient use of resources.
- Confidentiality of data should be maintained when legitimately required.
- For collaborative research, an appropriate memorandum of understanding (MoU) and material transfer agreement (MTA) should be in place as per the requirement.

3. Responsibility while conducting research:

- Researcher should be fully responsible for conducting research.
- Safety practices must be followed in all research activities.
- Research subjects – humans or animals and non-living resources must be dealt or handled with respect and care.
- Health, safety or welfare of a community or collaborators should not be compromised during the study.
- The protocols that govern research involving human participants (ICMR guidelines) should be stringently followed.
- The researcher must refrain from involving and causing harm, stress or pain to an animal in any study that does not contribute substantial benefit to human society. The expected benefits of such research must outweigh the harm or distress inflicted on an animal.
- Laboratory waste disposal or treatment should be as per the guidelines and with least harm/damage to the environment.
(Reference: OECD Principles on Good Laboratory Practice, DST, Government of India)

4. Publication ethics:

- Honesty and accuracy should be maintained in communicating the study results to public and media.
- The results of a study should be published in an open, transparent, and accurate manner, at the earliest possible time, unless intellectual property considerations justify delay.



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- All authors, unless otherwise specified, should be fully responsible for the content of publication.
- Researchers must follow acknowledgement and citation norms. Researchers should follow guidelines of International Committee of Medical Journal Editors (ICMJE), and Committee on Publication Ethics (COPE) on publication ethics, research integrity and authorship.
- The criteria for establishing the sequence of authors should be agreed by all, ideally at the start of the project.
- Contributions by collaborators and assistants should be acknowledged, with their permission.
- Financial and other support for research should be acknowledged.
- All authors should declare non-conflict of interest or conflict of interest, if any.
- The researcher should refrain from research misconduct involving fabrication, falsification, or misrepresentation of research findings.
 - ✓ *Fabrication* means making up data or results without performing due experiments and reporting them in presentations/publications.
 - ✓ *Falsification* means manipulating the outcome of the experimentation. It is manipulation of research materials, equipment, processes, and results.
 - ✓ *Plagiarism* is appropriation of another person's ideas, processes, results, or words without giving appropriate due credit. It is presentation of someone else's research idea, manuscript, article or text or parts thereof as one's own.
- The institution follows zero-tolerance policy toward plagiarism. Research work conducted must be subjected to plagiarism check with a standard detection software, the report of which should be submitted along with the thesis/publication.
Levels of Plagiarism would be quantified into following levels in ascending order of severity for the purpose of its definition:
 - i. Level 0: Similarities up to 10%
 - ii. Level 1: Similarities above 10% to 40%
 - iii. Level 2: Similarities above 40% to 60%
 - iv. Level 3: Similarities above 60%**Similarities up to 10% only will be accepted.**
- Research supervisors should help the researchers select peer reviewed journals that are indexed in authentic abstract and citation databases such as SCOPUS, Web of Science and UGC CARE. Publishing in predatory journal should be avoided.

5. *Editorial/Reviewer responsibility:*

- Reviewers should provide accurate, objective, substantiated and justifiable assessments, and maintain confidentiality.
- Reviewers should not, without permission, make use of material in submitted manuscripts.
- Reviewers who consider applications for funding, or applications by individuals for appointment or promotion or other recognition, should strictly observe the guidelines.
- An editor or reviewer with a potential conflict of interest should withdraw from involvement with a given publication or disclose the conflict to the readership.

6. *Biosafety norms*

A. Research involving microorganisms

Activities and projects conducted in biological laboratories are categorized by biosafety level (BSL). The four biosafety levels are BSL-1, BSL-2, BSL-3, and BSL-4, with BSL-4 being the highest (maximum) level of containment.



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Research projects are classified as under:

1. Bio-safety Level 1 (BSL-1): Involving micro-organisms and/or genetically modified organisms (GMOs) with no pathogenesis. Requires basic level of containment that relies on standard microbiological practices with no special primary or secondary barriers recommended, other than a sink for hand washing.

2. Bio-safety Level 2 (BSL-2): Involving micro-organisms and/or GMOs with pathogenesis but unlikely to be a serious hazard. Requires good microbiological techniques, protective clothing, and biosafety cabinet.

3. Bio-safety Level 3 (BSL-3): Study involving clinical samples and pathogen that causes serious human or animal disease but does not ordinarily spread from one infected individual to another and effective treatment and preventive measures are available. Requires As Level 2 plus special clothing, controlled access, directional airflow, BSC and/or primary devices for all activities.

4. Bio-safety Level 4 (BSL-4): Study involving clinical samples and highly infectious pathogen that causes serious human or animal disease. Requires generally a separate building or completely isolated zone with complex, specialized ventilation requirements and waste management systems to prevent release of viable agents to the environment.

- Research projects falling in BSL-1 or BSL-2 category only are permitted to be executed in the college premise.
- Researcher should undertake training and acquire proficiency in Good Microbiological Techniques.
- The bio-safety equipment/cabinet should be checked every six months.
- Handling, storage, and waste disposal of all clinical and microbiological samples should be done as per safety guidelines and good microbiological techniques should be practiced.
- Projects at BSL-3 and BSL-4 levels can be carried out by investigators of the college in collaboration with and at institutions where permissions and facilities to carry out such work are available. A copy of the letter of permission from the collaborating institute/laboratory must be submitted to the college's Research Advisory and Ethics Committee.

B. Research involving human subjects or animals

- The institute has no facility for conducting research involving animals or human subjects. Such study can be conducted in collaboration with and at institutions where permissions and facilities to carry out such work are available.
- It is mandatory to acquire ethical clearance from the Animal Ethics Committee of the collaborating institute. The ethics committee report should be submitted to the institutional Research Advisory and Ethics Committee before initiating the research.
- All experimental protocols involving the use of animals should follow the rules laid down by CCSEA (Committee for Control and Supervision of Experiments on Animals), Government of India.
- All experimental protocols involving the use of human subjects should follow the rules, laid down by the ICMR, Government of India (National Ethical Guidelines for Biomedical and Health Research involving human participants)



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C. Research involving radioisotopes

- In case of use of radioisotopes for academic purpose (Excludes commercial and medical testing), it is mandatory to follow and comply to the regulatory safety process and safety guidelines laid down by the Atomic Energy Regulatory Board (AERB), Government of India.
- It is mandatory to the institute to obtain a No Objection Certificate from AERB during procurement of the material and comply to the periodic submission of Safety Status Report, as required by AERB.

7. Research Supervisors and students must follow the rules, guidelines and operating procedures laid down by the University of Mumbai and the UGC, and the amendments thereof.

The researcher must submit the declaration form for Conflict of interest and Plagiarism check report to the Institutional Research Advisory and Ethics Committee while, reporting and publishing the research.

8. Research misconduct

- Non-compliance of the above-mentioned code of conduct or deviation from the rules and regulations laid by the University of Mumbai or the UGC, shall be considered as research misconduct.
- In case of suspected research misconduct or allegation, the Head of the Institute will be the final deciding authority.
- The Head of the institute may constitute an appropriate enquiry committee to evaluate misconduct/ allegation. The enquiry committee's report will be shared with the Head of the institution. Based on the extent of misconduct, action will be taken by the Head of the institute.
- Investigation should be kept confidential to safeguard the rights of the complainant and respondent.

Abbreviations used:

AERB: Atomic Energy Regulatory Board

CARE: Consortium for Academic Research and Ethics

COPE: Committee on Publication Ethics

CCSEA: Committee for Control and Supervision of Experiments on Animals

DST: Department of Science and Technology

ICJME: International Committee of Medical Journal Editors

ICMR: Indian Council of Medical Research

OECD: Organization for Economic Co-operation and Development

UGC: University Grants Commission



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Related links for reference

1. UGC book, 2021, "Academic Integrity and Research Quality"
2. UGC Regulations, 2018 -Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions. https://www.ugc.ac.in/ugc_notices.aspx?id=MjA3OQ
3. Biosafety manual for public health laboratories prepared by National centre for Disease Control, Government of India <https://ncdc.mohfw.gov.in/WriteReadData/1892s/File572.pdf>
<https://ncdc.mohfw.gov.in/WriteReadData/1892s/File608.pdf>
4. ICMR- General Guidelines -Establishment of BSL-4 laboratory https://main.icmr.nic.in/sites/default/files/upload_documents/Revised_ICMR_Guidelines_2_December.pdf
5. ICMR guidelines on involvement of Human subjects https://ethics.ncdirindia.org/asset/pdf/ICMR_National_Ethical_Guidelines.pdf
6. OECD Principles on Good Laboratory Practice, DST, Government of India <https://dst.gov.in/sites/default/files/No1.pdf>
7. CCSEA guidelines for handling of animals in research https://org.iisc.ac.in/wp-content/uploads/2020/11/SOP_CPCSEA_inner_page.pdf
8. AERB <https://www.aerb.gov.in/english/regulatory-process>
9. Publication Guidelines by ICJME <https://www.icmje.org/recommendations/browse/>
10. Publication Guidelines by COPE <https://publicationethics.org/guidance/Guidelines?t=&sort=score>
11. Patwardhan B., Desai A., Chourasia A, Nag S., Bhatnagar R. 2020. Guidance Document: Good Academic Research Practices. New Delhi: University Grants Commission. https://www.ugc.gov.in/e-book/UGC_GARP_2020_Good%20Academic%20Research%20Practices.pdf



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