Guidelines for Research and Development

KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY (KIIT)

Deemed to be University

(Established U/S 3 of UGC Act, 1956)
Bhubaneswar, Odisha, India

Contents

CHAPTER-I

INTRODUCTION

RESEARCH AT KIIT DEEMED TO BE UNIVERSITY

Starting primarily as a teaching engineering institute in the mid-nineties, KIIT Deemed to be University (KIIT-DU) has grown today to achieve the status of an institute of repute, branching out to grow as a mulit-disciplinary University with focus on inter-disciplinary research and cutting-edge technology. Aligning its research policy with the desired features of research stated in the National Education Policy 2020, the University has created a healthy research culture, a highly motivated community of faculty and students, a strong research infrastructure, a very supportive administrative machinery, and an intimate link with industry, government, and the society to foster creative research and innovation and transmit the evidence-based research outcomes to the outside world.

This guidelines outlines the principal characteristics of research policy and ethics followed by the University and the facilities of sponsored research, consulting services, and collaborative research that help in realizing the Vision and Mission of the University to strengthen and accelerate basic, translational and clinical research and establish new start-up and platform technologies in the areas of physical, chemical, biological, mathematical, medical, engineering, agriculture, environmental, management, law and social sciences.

The University has two high-level committees: (i) Research Advisory Committee (RAC) and (ii) University Level Research Committee (ULRC). The RAC provides the overall future directions of research under various advisory capacities while the ULRC provides the indepth research guidelines and monitors the research activities on a day to day basis as well as submit the research progress reports to the RAC. . The Committees are chaired by the Vice-Chancellor and the members are eminent researchers drawn from both within and outside the University.

Research Advisory Committee (RAC):

(The composition of the committee will be valid for three years)

Vice-Chancellor, KIIT-DU	Chairperson
Pro Vice-Chancellor, KIIT-DU	Member
Research Chair, KIIT-DU	Member
Prof. A. K. Singh, Former Professor, IIT Bombay	Member (External)
Prof. Indranil Manna, Vice-Chancellor, BIT Mesra	Member (External)
Prof. A. Tripathy, Former Professor, IIM, Ahmedabad	Member (External)
Prof. V. Vetrivel, IIT Madras	Member (External)
Prof. Gautam Barua, Ex Director, IIT Guwahati	Member (External)
Professor Emeritus, Public Policy Res, KIIT-DU	Member
DG R&D, KIIT-DU	Member
Registrar, KIIT-DU	Convener

University Level Research Committee (ULRC):

(The composition of the committee will be valid for three years)

Vice-Chancellor, KIIT-DU	Chairperson
ProVice-Chancellor, KIIT-DU	Member
Research Chair, KIIT-DU	Convener
Registrar, KIIT-DU	Member
Chairman, Social Science Research	Member
Director, R&D	Member
Director, R&D, SOT	Member
Director, QA Cell	Member
Director, KLS	Member
Dean, KSOM	Member
Vice-Principal, KIMS	Member

AREAS OF RESEARCH

The University is engaged in cutting-edge research in areas as diverse as labor law, health care policies and management, management of natural resources and waste utilization, climate change, basic and translational health research, communicable and non-communicable diseases, chemical and biological networks, advanced materials research and nanotechnology, renewable energy, computational finance, mathematics, engineering science and technology, computer and information technology, management, education, and social sciences. with research findings having been published in high-impact, indexed national and international journals.

RESEARCH FACILITIES

KIIT-DU has developed excellent research infrastructure to support high-class research. It has created a State-of-the-Art Central Research Facility (CRF) that houses high-end instrumentations including Nuclear Magnetic Resonance (NMR) Spectroscopy, Scanning Electron Microscopy (SEM), Field Emission Scanning Electron Microscopy (FESEM), X-Ray Diffraction Analysis (XRD), Particle Size Analyzer, Gleeble Thermal Mechanical Simulator, Raman Microscopy, Servo Hydraulic Dynamic Testing System, High Energy Ball Mill, Vibrating Sample Magnetometer, Nano Indenter, Rheometer, 3D Doppler Velocimetry & Phase Doppler Particle Size System, 2D Particle Image Velocimetry, Dynamic UTM, Transmission Electron Microscopy (TEM), Ion Chromatography, Elemental and Organic Carbon Analyser, and CHN Analyser.

Several other sophisticated instrumentations and facilities, such as Confocal Microscopy, Flow Cytometry, Fluorescence Microscopy, HPLC, qPCR, Experimental Animal Facility, Image Analyzer, DC/RF Sputtering System, 3D Printing, 3000 kN Servo Controlled UTM, Coordinate Measuring Machine (CMM), are available at various schools of the University.

CHAPTER - II

UNIVERSITY RESEARCH POLICY

The following principles and guidelines constitute the basis of the policies on the development, promotion and conduct of research at the University:

2.1. Fundamental Principles: As stated in its Mission, KIIT-DU is committed to carry out basic and applied research in all fields of human activity and disseminate the research results to the larger community of the society. This commitment shall be fulfilled by adhering to the principles of freedom of research, researcher autonomy, research integrity, and research ethics.

In tune with the basic tenets of the tradition of education, scholarly research shall be free, provided it complies with the principles of research integrity and research ethics. Research integrity requires individual research themes to dovetail into the scope outlined by the University and the National Education Policy 2020 and to the identified research areas of national priority. The researchers are free to seek funding for their research from any funding agency that seems to be appropriate.

2.2. University Support for Research: In order to promote a high-quality research ambiance that integrates well with the academic and teaching programs and to create strong research commitments in the early-career faculty researchers, the University provides intramural research support on a priority basis to the young faculty members.

2.3. University-level academic and research positions under different category: KIIT-DU encourages all its faculty members to engage in inter- and multi-disciplinary research. Moreover, the University inspires many women faculties to take part in research activities across various disciplines. Furthermore, the University nominates and recruits many faculties through Ramanujam, Ramalingaswami, DST-INSPIRE and DBT-India Alliance Welcome Trust programs. It also engages a large number of Research Associates and Post-doctoral fellows through SERB-National Post Doctoral Fellowship (N-PDF) and DBT-Research Associate programs; Ph.D programs through CSIR, UGC, DBT, ICMR and ICAR fellowship; KIIT Entrance Examination (KIITEE), and Summer Research Fellowships (SRF) through association with all three Indian National Academy of Sciences.

KIIT-Deemed to be University strongly encourages research networks among its various academic units in order to achieve the following:

- Create an enabling research environment for the members in the individual departments and units to engage themselves in active research.
- Support international research projects through cooperation between individual researchers and University research centers as well as international partners.
- Secure national and international research funding for collaborative research jointly with other national and international Universities and Institutions.
- Cooperate with the corporate sector, nationally and internationally, to promote funded cooperative research.
- Integrate research results with classroom teaching .
- Strengthen industry-academia research collaboration by connecting with the industrial world within India and abroad.
- Establish new start-ups and develop new platform technology in relation to human diseases, environmental sciences, plant and agriculture, water and waste management, artificial intelligence, machine learling, cyber security etc.

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SPONSORED RESEARCH

3.1. STARTUP AND TECHNOLOGY DEVELOPMENT

The KIIT Technology Business Incubator (KIIT-TBI) (For details please refer to KIIT TBI website) established in the KIIT Deemded to be University is one of the best in the country. The KIIT TBI and other schools of KIIT have initiated a large number of Startup programs and developed multiple platform technologies in the areas of affordable Health Care, Agricultural and Plant Sciences, Environmental Science, Artificial Intelligence, Machine Learning, Deep Learning, Internet of Things (IoT), Augmented Reality (AR), Geopolymer for Highway Surface Coating, Additive Manufacturing, Controlling of Traffic Signaling and Management of Tribal Health Care, etc.

3.2. GOVERNMENT-SPONSORED NATIONAL & INTERNATIONAL RESEARCH FUNDING

KIIT-DU has created a strong ecosystem for conducting state-of-the-art research at various laboratories across the University and generating funds through multiple national-level funding agencies such as the Department of Science & Technology (DST) - SERB, Ministry of Education (MoE), Defense Research & Development Organization (DRDO) including ARDB, Department of Biotechnology (DBT), University Grants Commission (UGC), Council of Scientific & Industrial Research (CSIR), Indian Council of Medical Research (ICMR), Department of Health Research (DHR), Department of Atomic Energy (DAE) including BRNS, All India Council for Technical Education (AICTE), Ministry of Mines, Indian Council of Agricultural Research (ICAR), Ministry of Road Transport & Highways (MoRT&H), Ministry of New & Renewable Energy (MNRE), Indian Council of Social Science Research (ICSSR), Institution of Engineers (IE), Indian Society of Heating, Refrigerating & Air Conditioning Engineers (ISHRAE), etc. In addition, the University also receives a large number of international funding obtained through Indo-Japan, Indo-Norway, Indo-German, Indo-Australian, Indo-South African, and Indo-Russian collaborations and from international agencies such as UKERI, Swedish Research Council, and ERASMUS. Furthermore, many of our faculty members have received funding through Ramanujam Fellowship, DST Inspire

Fellowship, Ramalingaswami Fellowship, DST Women Scientist Fellowship, DBT Biocare Programs Fellowship, etc. Many Ph.D. students have received national-level CSIR, UGC, AICTE, DBT, ICMR, ICAR, DST Inspire fellowships. In addition, the University is also providing Institutional level research Funding and Fellowships across all Schools and Institutes.

3.3.NON-GOVERNMENT SPONSORED RESEARCH PROJECT

The University has received funding through non-government-sponsored research projects including projects from NALCO, Tata Steel, Ernst & Young, CharakaHanf Pvt Ltd, RSP Global, etc.

TERMINOLOGY:

The following terms are used in connection with the sponsored research projects

3.3.1. **Sponsored Research Project**

Sponsored research projects are projects that are funded by agencies such as Government, public, private, national/international and autonomous bodies having specified time limits and with the entire project cost including cost of acquision of equipment and manpower, and expenses on consumables and contingency borne by the sponsor.

3.3.2. Sponsor

A sponsor is a funding organization/body who offers research project to the University and gives the necessary financial support for the successful and timely execution of the project.

3.3.3. Project Coordinator (PC)

A project coordinator is one whose task is to coordinate a project if it is in the multi-centric mode(i.e, if the project is carried out by more than one centre)

3.3.4. Principal Investigator (PI)

Any faculty of the university who conceptualizes a research project is the principal investigator of the project.

3.3.5. **Co-Principal Investigator (Co-PI)/Co-Investigator (Co-I)**

Aninvestigator who is associated with the preparation of the project proposal and who participates in the conduct of project execution can be a Co-Principal Investigator or Co-Investigator (Co-I) of the project. As per the Government of India and private sponsoring agency's policy, if the PI has a premature death or leaves the University, the Co-PI or Co-I will be the official PI of the project.

3.3.6. **Project Employee**

Research Associates (RA), Senior Research Fellows (SRF), Junior Research Fellows (JRF), Project Associates I and II, Project Assistants, and other supporting staff who are hired by the University exclusively for the purpose of the execution of a project are the project employees The are hired following the funding agency and the University guidelines.

3.3.7. **Industrial Consultancy**

An industrial consultancy project is a time-bound, specific problem-solving project sponsored by private and public sector industrial units and government, where the project cost includes consultancy fee/honorarium to the investigator(s) in addition to all other project-specific expenses.

3.3.8. Equipment Grant

The sponsoring agency supports funding under the non-recurring head for the purchase of equipment and instruments associated with the approved objectives of the project.

3.3.9. Overhead

Overhead includes expenses incurred by the university to administer the execution of a project and to provide the basic infrastructure, library, laboratory and computer section along with other supportive facility for its successful completion. A part of the project cost for every project is earmarked towards meeting the overhead expenses.

3.3.10. Consumable Grant

The funding agency provides support for the purchase of various chemicals, reagents, plastic wares, glasswares, etc. associated with the approved objectives of the project.

3.3.11. Contingency Grant

The contingency fund is used for the purchase of official and laboratory-related items associated with the project from the local market.

3.3.12. Travel Grant

The travel fund is used for attending project-related meetings organized by the funding agency as well as national conferences and workshops by the PIs, Co-PIs and the project employees.

3.4.   DUTIES AND RESPONSIBILITIES OF THE PRINCIPAL INVESTIGATORS (PIs)

3.4.1. Each proposal is prepared with the help of a PI, Co-PI, and one or more Co-Is. The final proposal is submitted to the Office of the Director, Research and Development (R&D) for approval. The approved proposal is forwarded to the Office of the Registrar by Director, R&D, and the signed copy of the endorsement certificate is issued to the PI by the Office of the Registrar. The approved copies of the full proposal with financial details and internal code number are submitted to the office of the Director, R&D.

3.4.2. When the project is approved by the funding agency, the PI should submit the approved sanction order and the release order, which are given by the funding agencies, to the Finance Office, Head of the School, Quality Assurance Cell, Registrar's office, HR cell along with the office of the Director, R&D.

3.4.3. The PI should maintain all files related to the research project including the documents related to the progress on the research front and the financial expenses in coordination with the set rules of the Finance Section of the University.

3.4.4. It shall be the responsibility of the PI to get the Project work completed satisfactorily within the sanctioned budget and schedule. .

3.4.5. The PI should follow the University guidelines for the purchase of equipment approved under the project grant and should submit the required indent to the Purchase Section as per the University Equipment Purchase Committee guidelines.

3.4.6 The PIs shall be responsible to submit the scientific and technical progress report on a yearly basis to the funding agency as well as to the University.

3.4.7. The PI should coordinate with the funding agency to facilitate timely release of funds for the subsequent year after submitting the required documents, such as scientific progress report, Utilisation Certificate (UC) and Statement of Expenditure (SoE), Manpower and Asset details, The interest accumulated during the particular year based on the funds received from the funding agency should be submitted through Bharatkosh and the acknowledgment/receipt should be submitted to the funding agency in a timely manner.

3.4.8. After the completion of the project, the assets will be the property of the University.

3.5. MANPOWER

3.5.1. The selection of Project Assistant/JRF/SRF/RA/other supporting staff shall normally be made as per the guidelines provided by the sponsoring agency and with the approval of the competent authority of the University. Once the project is granted, the Principal Investigator (PI) may submit the advertisement for recruiting the project staff to the Publication Cell of the University after the approval of DG, Human Resources and the Registrar and advertise the post through the University website.

Recruitment of such project employees will be made through a selection committee consisting of

     (i)   PI and Co-PI as members
     (ii)   An Expert member from the University nominated by the PI
     (iii)   An External expert member nominated by the Director R&D.
     (iv)   Head of the School as the Chairman.

The Merit list will be prepared and approved by the Chairman and the members of the Committee followed by the Head of School..

3.5.2. All appointment letters shall be issued by the Registrar of the University.

3.5.3. All project appointments will be on a temporary basis as per the Funding agency's guidelines.

3.5.4. Automatic transfer of a staff from one project to another either on completion or midway through the projects shall not be permitted.

3.5.5. The tenure of appointment of a project staff will depend on the approved duration of the project. Renewal of service of a project staff will be judged by an expert committee based on an evaluation of the performance of the project staff on yearly basis.

3.5.6. If a PI leaves the University, then the Co-PI will take over the responsibility of the execution of the project. If the Co-PI is not part of the University, then a fresh approval will be sought from the funding agency to include a Co-PI from the University.

3.5.7. If the project JRF/SRF is interested to pursue Ph.D. after qualifying CSIR/GATE/KIITEE entrance examination, the candidate may be permitted to registrar the Ph.D. program under the supervision of PI as a guide and Co-PI as a co-guide.

3.5.8. If the PI joins another institute within India and if he/she desires to transfer the Project to that Institute, the University will consider the request for such a transfer only after the Funding Agency permits such a transfer and a No Objection Certificate is obtained from the joining Institute for such a transfer.

3.5.9. The employees working under the project may avail the leave as per the guidelines of the University as well as the funding agency.

3.5.10. The project employees shall strictly follow the general code of conduct and ethical guidelines for the generation and maintenance of scientific data associated with the project as per the University and funding agency guidelines.

3.5.11. A Ph.D. student working under the project, can not claim the fellowship from University, if project terminates before completing the Ph.D. program. However, the candidate may apply for a Senior Research Fellowship (SRF) from the funding agencies like CSIR, ICMR, etc.

3.5.12. The regulation of the Ph.D. program is strictly controlled by the University as per the Ph.D. guidelines.

3.6. FINANCE AND ACCOUNTS:

3.6.1. The overhead shall be charged towards service charges for utilizing the infrastructural and other facilities of the University as per the Government of India (GoI) policy. In the case of non-government sponsored projects, the PI must include 15% as the overhead charge in the budget. However, if the sponsoring agency does not pay the overhead charge, the University may consider a waiver of the same.

3.6.2. The funds sanctioned under each project will be deposited in the specific bank account of the University. The centralized purchase committee of KIIT approves all the purchase and the associated expenditure of the project as per the university level purchase guidelines.

3.6.3. All expenditures must be made within the specified time frame of the approved project and the approved date of completion of the project.

3.6.4. If any excess expenditure is occurred due to unforeseen reasons, the funding agency will be approached to sanction additional funds. If no additional fund is made available by the funding agency, the excess expenditure may be adjusted against the allotted overhead budget (if any) payable to the University with the approval of the Vice-Chancellor on a case-to-case basis.

3.6.5. A separate account shall be maintained by the Account section of the University for each project. The audited utilization certificate (UC) and the statement of expenditure (SoE) shall be prepared by the Account section in coordination with PI and should be submitted to the funding agency after the completion of each year of the project.

3.6.6. The Travel Allowance (TA) and Dearness Allowance (DA) will be provided to the PI, Co-PI and project staff under the project as per the University as well as the funding agency guidelines.

3.6.7. If a portion of research work need to be performed through other organization in an outsourcing mode, the proper selection of outsourcing party and negotiation of expenditure will be followed as per the University as well as the funding agency's guidelines.

CHAPTER-IV

CONSULTANCY SERVICES

4.1. CONSULTANCY POLICY AND MECHANISM

KIIT Deemed to be University extends to its academic staff the privilege of providing consulting services to external organizations in both public and private sectors, whether national or international, because such activities can contribute to the professional development and stature of the faculty member, and improve the image of the University apart from providing rational bases for practical problem solutions. . This service enhances faculty's professional expertise, establishes and maintains professional contacts, associations and relationships, and develops opportunities for sponsored research. 'Consulting activity' is different from 'Sponsored Research' and is defined as professional work performed either inside or outside the University auspices that is substantively related to a faculty member's area of expertise and duties at the University.

Professional consultancy is encouraged across the University; however, such activities should strictly adhere to the conflicts of interest policy of the University and be done within a specific time frame. The University has constituted a University-level consultancy committee which issues guidelines to regulate the consultancey-related activities by the faculties of the University.

There are certain basic principles in the conduct of consultancy projects. The most fundamental is the maintenance of high ethical standards, application of the state-of-art knowledge, and exhibition of high quality professionalism. Consultancy at KIIT-DU is multi-dimensional and interdisciplinary in nature. Consultancy Services may be offered to Industries, Service sectors, Government Departments and other National and International agencies in niche areas of expertise available at the Institute. An agency, seeking a consultancy service, can either contact the University or contact an individual faculty member of the University.

4.2. TYPES AND EXECUTION OF CONSULTANCY PROJECTS

Consultancy services offered may cover a variety of activities such as Technology Assessments; Evaluating project feasibility; Analytical studies; Preparation of Detail Project Reports (DPR); Maintenance Engineering; Assessment & Validation of Designs/ Drawings and/or Current Manufacturing Process; Testing and Calibration; Material, Energy, Environmental and Manpower Audits; Product Design; Structural and Machine Condition Monitoring; Development of New Alloy; Process Development; Software Development; General Troubleshooting, Retrofitting Exercises; Development of next-generation LED lamps for improving light quality; Intensive efforts for transfer of highly focused skills and expertise to select groups in specific organizations; vision and strategy statement; Development and Validation of Medical Device; Establishment and testing of Drugs at the preclinical level; Development of new technology for the improvement of palliative care; Development of tele-medicine and tele-nursing based approach; Development of AI-based platform for management of patient care both in rural and urban areas; Development of non-toxic soft material for next-generation of root canal therapy; Development of software driven platform for management of better traffic signal and accident related issues; Skill development; handling of legal compliance and so on.

Faculty members are encouraged to take up consultancy assignments to complement their ongoing academic teaching and research and to involve . postgraduate and Ph.D. students taking due permission from the University.

The consultancy projects will be evaluated by the University level consultancy committee prior to submission. After the approval of the project by the funding agency, a Memorandum of Understanding (MoU/MoA) will be signed between the University and the funding agency which describes the details of the contract such as deliverables, milestones, payment schedules, role and responsibilities of the parties, non-disclosure of confidential information, disputes resolution, liability, IPR matters, arbitration, and applicable law depending on nature and type of work. A Non-disclosure Agreement (NDA) may be signed between the parties to protect the confidentiality of the project.

4.3. COSTING OF CONSULTANCY PROJECTS

The costing of the consultancy project will be finalized by PI in discussion with the University level consultancy committee along with the finance officer and other party. These include consultancy fees, charges for personnel engaged in services, project staff salaries, operating expenses, cost of capital equipment and overheads. Service and other taxes shall be applicable as per the tax guidelines. These guidelines will be applicable to all consultancy projects on a case-to-case basis (For details please refer to the Guidelines for Consultancy Services).

4.4. FINANCIAL BENEFITS

For consultancy projects, if University infrastructure, laboratory and staff are used, the consultancy fees will be 60% for the PI and associated team members and 40% for the University after deducting recurring and statutory expenses. Those who are not directly involved under the consultancy project, should not be paid any remuneration through this consultancy fund. If the faculty does not use any University facility, the sharing of remuneration will be decided by the competent authority.

CHAPTER -V

RESEARCH ETHICS AND PUBLICATIONS

5.1. RESEARCH ETHICS

Research Ethics is an act of moral principles that the researcher has to follow while conducting research to ensure the rights and welfare of individuals, groups or communities under study. Research ethics is fundamental to research practice, education and the development of evidence. In conducting research, it is important to plan and to anticipate any potential or actual risks. Ethical principles, as determined by the University's rules governing human rights, animal protection, and protection of environment, shall be observed at all times in all kinds of research activity at KIIT-DU. The researcher must adhere to the principles of justice, beneficence, non-malfeasance, accountability, fidelity, autonomy and veracity.

The vibrancy of research programs at the University is accentuated by high-quality publications including original research articles, review articles, books, book chapters and creative write-ups published by the faculty members of different schools and academic units of the University. The intellectual contribution of a University to the community at large can be gleaned from the quality of publications by the faculty members. While conducting research, certain ethical values like human dignity, autonomy in decision making, privacy, justice, precision and accuracy in caring, commitment, sympathy, human relationship, honesty and individual and professional competency must be considered. The University has constituted a University Level Ethics Committee (ULEC) which handles all the ethics-related issues related to research, publications, patents, etc. which are conducted by undergraduate, postgraduate and Ph.D. students as well as faculty members of the University.

University Level Ethics Committee (ULEC):

(The composition of committee will be valid for a period of three years)

Vice-Chancellor, KIIT-DU   Chairperson

Pro Vice-Chancellor, KIIT-DU	Member
Research Chair, KIIT-DU	Member
DG, R & D	Member
Vice Principal, KIMS	Member
Director, R&D	Member
Director R & D (SoT)	Member
Member, School of Law	Member
Registrar, KIIT-DU	Convenor

A school level Institutional Ethics Committee (IEC) has been constituted at KIIT-DU with internal members as regulated by the Government of India to use human patient's specimens and biofluids involved in research to protect the welfare of human subjects conducted by the University. The committee reviews and approves all types of research proposals involving human participants, looking into the aspects of the informed consent process, risk-benefit ratio, distribution of the burden, etc. The study related to clinical trial is also monitored by IEC after following all the guidelines of the Indian Council of Medical Research (ICMR) and the Ministry of Health and Family Welfare (MoHFW).

A school level Institutional Bio-Safety Committee (IBSC) has been formed at KIIT-DU with internal and external members as regulated by the Government of India to review, approve and monitor research activities involving recombinant DNA (rDNA) technology and genetic manipulation of microorganisms, plants or animals. The committee reviews and approves projects before the commencement of the research activity for the safe use of rDNA technology and genetically modified organisms.

A school level Institutional Animal Ethics Committee (IAEC) has been constituted at KIIT-DU with internal and external members as regulated by the Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA), Ministry of Environment, Forests and Climate Change, Government of India to review, approve and monitor research activities involving experimental animals. The IAEC reviews, approves and monitors the projects involving animal research. In case of new diagnostic methods or new drugs, the standard national guidelines framed by the Central Drugs Standard Control Organization (CDSCO), Ministry of Health and Family Welfare, Government of India, should be followed appropriately.

The institutional approval of IEC, IBSC and IAEC should be submitted to the funding agency prior to the release of the fund. The University and its researchers have a responsibility to ensure the safety usages related to biological, biomedical, chemical and radioactive hazardous materials associated with the research. It is also essential that the design of projects takes into account of any relevant ethical guidelines. Appropriate personal care should be taken to maintain safety and minimize accidents while conducting research with hazardous chemicals/flammable solvents/living organisms etc. The University level safety committee should look into the safety matter pertaining to these issues. Extra care should be taken to ensure that various research activities of KIIT-DU do not compromise other common men who are residing near the University or pollute the environment.

Gender-based harassment and sexual misconduct at KIIT-DU are strictly unacceptable. It is crucial for all researchers to proactively sensitize the scientific community on these issues and develop a gender-friendly work environment.

5.2. PUBLICATION

5.2.1. As a general principle, every research outcome, along with the research process and associated data, should be disseminated to a wider scientific community for information and scrutiny and for furthering research.

5.2.2. The original reproduced data generated through research at KIIT-DU should be published in peer-reviewed journals or stored in public space for everyone's access. The intra- and inter-institutional collaborative data can also be published in these journals. Both the text and generated data should be analyzed through specific software such as iThenticate or Turnitin before their submission to journals.

5.2.3. Similarly, every PhD/MPhil/MTech/MSc/MD/DM/MS thesis submitted to KIIT-DU shall also be scrutinized for plagiarism by the above-stated software packages.

5.2.4. An author should not submit substantially similar work to more than one jounalr for publication to avoid self-plagiarism.

5.2.5. As a general principle, research findings should not be reported in the public media before publication except where there is a contractual arrangement.

5.3. DATA STORAGE AND RETENTION

5.3.1.   Raw data produced in the laboratory must be noted in the laboratory notebook/computer on a daily basis and date-wise.

5.3.2.   The raw data should not be tampered at any time as this data forms the basis of future analysis and results/conclusion of actual study.

5.3.3.   Data including electronic data must be recorded in a durable and appropriately referenced format. The University will establish procedures for the retention of data and for the keeping of records of data and will promulgate information about these procedures. All the raw data, both printed record book (hard copy) and soft copy should be stored at the research cell of each school/institute of the KIIT-DU at least for a period of 10 years. All unpublished data should be maintained with confidentiality till the date of publication.

5.3.4.   When the data are obtained from limited access databases, or via a contractual arrangement, a written indication of the location of the original data, or key information regarding the database from which it was collected, must be retained by the researcher and should be acknowledged properly.

5.3.5.   Researchers must be responsible for ensuring appropriate security for any confidential material, including that held in computing systems. Where computing systems are accessible through networks, particular attention to the security of confidential data is required. Security and confidentiality must be assured with multiple researchers and also after the departure of the individual researcher.

5.3.6.   Any tampering of stored E-data or any data should be reported immediately to the research Supervisor/Dean/Director for further action in written form.

5.3.7.   When a Researcher either temporarily or permanently leaves the University or submits the Ph.D. thesis, the associated Laboratory Notebooks containing raw and final data must be submitted to the concerned School of the University. A researcher can copy the contents of a laboratory notebook and retain the copied documents with him or her.

5.4. AUTHORSHIP

5.4.1. Authorship signifies that an individual has made a significant contribution to the work and is accountable for it. It also carries significant value for a researcher. At KIIT-DU therefore it is important that authorship is attributed accurately. The authorship can be decided on various criteria like substantial contribution in conceiving the idea, generating and analysing data, drafting the article, accountability, agreement to all the other authors, etc. It is not appropriate to offer guest authorship to anybody who does not make any significant contribution.

5.4.2. Authorship of research output should be discussed between researchers at an early stage in a research project and reviewed whenever there are changes in participation. Any dispute about authorship will be referred to the University Level Research Committee and the final decision will be made by this Committee.

5.4.3. When more than one author is contributing to the major component of the study, both these authors can act as joint first authors (contributed equally). Similarly, there can be more than one corresponding author in a single paper based on their contribution.

5.4.4. When the research work is published,, all co-authors must acknowledge their authorship in the paper with specific amount of contributions. All the authors must seen the final version of paper prior to the submission to the journal. On behalf of all authors, the corresponding author has the right to submit the article to the journal after taking permission from all other authors.

5.4.5. The authors must ensure that others who have contributed to the work are recognized in the research output. It is customary that the funding agencies and other individuals/organizations that provide funding and other supports should be acknowledged in the publication.

5.4.6. If any researcher participates in an interdisciplinary collaborative work, he or she can include, in the PhD thesis, only his/her contribution to the work, with due acknowledgement of the collaboration.

5.5. RESEARCH SUPERVISORS/RESEARCH SCHOLARS

5.5.1. The faculty of KIIT-DU who is supposed to guide masters and Ph.D. students should be recognized as an official guide of KIIT-DU. The Ph.D. candidate may also select one recognized co-guide along with the guide.

5.5.2. As per KIIT-DU as well as UGC guidelines, the maximum number of doctoral students is limited to 8 for a Professor, 6 for an Associate Professor, and 4 for an Assistant Professor. For details on the Ph.D. program, one should follow the University's "Regulations for the Ph.D. Program".

5.5.3. Supervisors should advise the research students on all the University-level guidelines for the conduct of research including those covering ethical requirements for human, animal, rDNA and genetically modified organisms related studies, occupational health and potentially hazardous safety issues including handling biological, biomedical, chemical and radioactive waste.

5.5.4. Supervisors should be the primary source of guidance to research students in all matters of good research practice. The supervisor must ensure, as far as possible, the validity of research data obtained by a student under his/her supervision. The research student, not the supervisor , is primarily responsible for the validity of the data.

5.5.5. The supervisors should strictly instruct the students to maintain their original research notebooks and its soft copy including raw and final data.

5.5.6. All those who are engaged in research including the doctoral advisors, post-doctoral fellows, and doctoral students should participatge actively in University level Journal Clubs and deliver talk on important research topics pertinent to their research field, on a weekly basis. Moreover, KIIT DU should invite national and international level speakers and arrange special seminar across all the interdisciplinary areas of KIIT DU. Furthermore, the University should organize high level national and international conferences in different disciplines across the academic calendar year of the University.

5.6. DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST

5.6.1. KIIT-DU is committed to ensure that anybody's individual and personal interest should not influence the research outcome and that he (or she) does not stand to gain financially or otherwise on account of the research outcome.

5.6.2. The authors should acknowledge the funding agency if that work is supported by intramural and extramural fundings.

5.7. MISCONDUCT IN RESEARCH

5.7.1. "Misconduct" or "Scientific Misconduct" is taken here to mean fabrication, falsification, plagiarism, or other practices that seriously deviate from those that are commonly accepted within the scientific community for proposing, conducting, or reporting research. It includes the misleading ascription of authorship including the listing of authors without their permission, attributing work to others who have not contributed to the research, and the lack of appropriate acknowledgment of work primarily produced by a research student/trainee or associate. It does not include honest errors or honest differences in interpretation or judgments of data.

5.7.2. Examples of research misconduct include but are not limited to the following:

5.7.2.1 **Misappropriation:** The authors shall not intentionally or recklessly:

- plagiarize, which shall be understood to mean the presentation of the documented words or ideas of another as his or her own, without appropriate acknowledgement;
- make use of any information in-breach of any duty of confidentiality associated with the review of any manuscript or grant application; or
- intentionally omit reference to the relevant published work of others for the purpose of inferring personal discovery of new information.

5.7.2.2. **Interference:** A researcher or reviewer shall not intentionally and without authorization take or materially damage any research-related property of another including reagents, biological materials, writings, data, hardware, software, or any other substance or device used or produced in the conduct of research.

5.7.2.3. **Misrepresentation:** A researcher or reviewer shall not, with the intent to deceive or in reckless disregard for the truth,

- state or present a material or significant falsehood; or
- omit a fact so that what is stated or presented as a whole state or presents a material or significant falsehood.

5.7.3. It is necessary, while conducting research, jointly or independently, that the data collected including the raw data are reliable, properly recorded and stored carefully. Falsification and fabrication of data including the data of relatively less importance to the research outcome are clearly defined as scientific misconduct.

5.7.4. On receipt of a complaint regarding misconduct in research, the Dean/Director/Principal of the school where misconduct took place shall inform the Vice-Chancellor of the nature of the complaint. Complaints of misconduct in research are to be made to the committee consisting of:

1. The Dean/Director/Principal of the School where misconduct took place, If a Dean is involved in research misconduct then he or she will be replaced by the nominee of the VC.
2. A Professor in the related subject area (but not Guide/Professor whose student or who is involved).
3. The Dean/Director, Quality Assurance
4. The Registrar (Convener)
5. An invitee with the approval of VC (if Chairman feels necessary).

The report will be submitted to VC for necessary action.

5.7.5. There will be a preliminary investigation of any allegation of research misconduct. Such an investigation will make provision for reveiving and considering a written statement on the allegations to be provided to the persons against whom such allegations are directed,. The preliminary investigation will be conducted under the direction of the Chairman and the committee to whom the complaint was made.

5.8. INTEGRITY IN RESEARCH

The research conducted at various schools and academic units of KIIT-DU should allow other researchers to have confidence and trust in the way they conduct their research and find the results and publish the research articles.

The University provides enabling research environment that promotes responsible conduct of research (Institute Integrity). It demands that correct and reliable results are not corrupted by fabrication, falsification, and other forms of misconduct (Research Integrity) and that individual researchers are committed to a certain set of values (such as openness, honesty and accountability) and norms of conducting research, analyzing data, and dissieminating research outcomes practiced by the scientific community (Researcher Integrity)

5.9. SCIENTIFIC DISCIPLINARY COMMITTEE AND SCIENTIFIC COMMITTEE

To establish research integrity and maintain the research discipline, the role of the Scientific Disciplinary Committee is very much essential at KIIT-DU. Based on the experience and expertise of the Scientific Committee, different scientific issues may be resolved, and alternative methods can be suggested for the greater interest of KIIT Deemed to be University.

5.10. INTELLECTUAL PROPERTY RIGHTS POLICY AND MECHANISM

The Intellectual Property Rights (IPR) Policy of the KIIT-DU aims at familiarizing all faculty, staff and students with the process of filing patent applications on their innovations, and associated issues, to encourage and facilitate the transfer of technologies, which may offer shared benefits to both KIIT-DU and the inventors and have positive impacts on the society.

Confidentiality agreements to protect IPR may be agreed upon between the University, the researchers and the funding agencies. For further details, the university-level IPR policy may be referred.

5.11. RESEARCH COMPLIANCES

The University Level Research Committee monitors the overall research activities of all the schools and academic units in the University in association with the School Level Research Committee (SLRC).

5.12. SCHOOL LEVEL RESEARCH COMMITTEE (SLRC)

The Univeersity has constituted the SLRC in each school and academic unit. The SLRC coordinates the progress of research activities of its schools and institutes on a continuous basis

CHAPTER -VI

RESEARCH COLLABORATIONS AND VISITING FACULTIES

6.1. RESEARCH COLLABORATIONS

KIIT-DU provides an ideal platform for undertaking collaborative research and development work with other Universities and Research Institutions within and outside India . The collaborations provide a strong research ambiance in the University and strengthen students and faculty exchange programs, enhance teaching and academic activities and accelerate high-end basic, translational and clinical research, develop platform technologies, and augment high-quality publications in peer-reviewed international journals, review articles, book chapters, national and international patents, national and international conferences, workshops and seminars, and help to create new startups in the area of engineering sciences, medical science, physical and chemical sciences, biological sciences and management sciences.

The University has initiated a multi-model Ph.D. program along with the Institute of Life Sciences (ILS), Bhubaneswar, Regional Medical Research Center (RMRC), Bhubaneswar, Reginal Center for Biotechnology (RCB), New Delhi, International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi, Institute of Bioresources and Sustainable Development (IBSD), Imphal etc. Similarly, B.Tech. minor degree program and industrial internship programs have been established with the Indian Institute of Metals (IIM), National Highway Authority of India (NHAI), National Council for Cement and Building Materials (NCCBM), Larsen & Toubro (L&T), High Radius, Amazon, Simplex Infrastructures Ltd, SKF India Ltd, GSK Pharmaceuticals, Lupin Ltd, Huwel Scientific, Redcliffe Life Sciences, Medgenome, Mercedes-Benz, TCS, Microchip, National Instruments, etc. In addition, many new research laboratories and center of excellence have been established in KIIT-DU in collaboration with industries such as Autodesk, Siemens, National Instruments, Robert Bosch, Mitutoyo South Asia Ltd, Schneider Electric, Preva System, etc.

As an Institute of Eminence (IoE), KIIT has collaborated with leading institutions and organizations from across the world. At present, KIIT has academic tie-ups with large number of world-class Universities and research institutions across the globe and industrial collaboration with corporate houses.

6.2. VISITING FACULTIES (National and International, Professor of Emeritus and Professor of Eminence)

The KIIT-DU has taken multiple steps and recruited a large number of visiting faculties from Indian academic organizations such as IITs, NITs, IISER, Central Universities, Indian Institute of Science (IISC), Bengaluru, AIIMS, IIM, National Research Institutes, Industries, and many other International Universities as a short-, mid- and long-term programs. Moreover, the University is creating multiple new positions at the level of Professor of Emeritus and Professor of Eminence, Professor of Practice. Through these mechanisms, both the teaching and research activities of the University will be enhanced drastically in the next 5 to 10 years.

**KALINGA INSTITUTE OF
INDUSTRIAL TECHNOLOGY (KIIT)**

Deemed to be University

(Established U/S 3 of UGC Act, 1956)
Bhubaneswar, Odisha, India