# **RESEARCH POLICY**

OF

## K. K. WAGH INSTITUTE OF ENGINEERING AND REASERCH HIRABAI HARIDAS VIDYANAGARI PANCHAVATI NASHIK 422003

(Revised from 1<sup>st</sup> January 2025)



## K.K.Wagh Institute of Engineering Education & Research, Nashik

## **RESEARCH POLICY**

## Preamble:

K.K.Wagh Institute of Engineering Education and Research, Nashik has been striving to develop itself into an institution of excellence in education and research in consonance with the contemporary and future needs of Maharashtra and India through meaningful education, original research of the highest standard and leadership in technological innovation for the industrial growth of the country. With the path-breaking innovations in both of its teaching, learning methodology and research, the institute is rapidly gaining a legendary reputation in the country.

In addition to offering formal undergraduate and post-graduate programs, the institute actively encourages its faculty and other academic staff to undertake sponsored research and consultancy projects to strengthen the research profile of the institute. Research and development are carried out in several areas like energy and environment, manufacturing, automobile, telecommunication, materials, simulation, infrastructure, and computation.

These projects are very important for maintaining external linkages and are also as a source of revenue for the institute.

The Research Promotion Scheme of institute aims to nurture research culture in the institute by promoting research in newly emerging and challenging areas of science and engineering. It encourages the Undergraduate, Postgraduate and Doctoral degree candidates to undertake research in newly emerging frontier areas of science and engineering including multidisciplinary fields. This will enhance the general research capability of budding technocrats and present it by the way of participating in conferences, seminars, workshops, project competition, etc.

#### **Objectives:**

- 1. To formulate a research development program to equip the faculty with the knowledge, skills, and competence to do research and publish their research outputs.
- 2. To encourage students to engage in various types of research activities for social problems.
- 3. To improve research productivity of students and the quality of students research.
- 4. To encourage the faculty to engage in various types of research activities leading to patents and copyrights.
- 5. To produce, through the research team, refereed articles for publication in different research journals.
- 6. To encourage faculty to apply and obtain funding from various agencies.
- 7. To depute faculty members for conferences, research workshops for enhancing their research aptitude.
- 8. To depute faculty members for Ph.D. and Post Doc and students for research internships.

#### Institute Research and Development Committee (IRDC):

Sr. No.	Name of Member	Post	Committee Designation
1.	Dr. K. N. Nandurkar	Principal	Chairperson
2.	Dr. S. M. Kamalapur	HOD Computer	Member
3.	Dr. P. D. Jadhao	HOD Civil	Member
4.	Dr. P. J. Pawar	HOD Production	Member
5.	Dr. D.M Chandwadkar	HOD E/TC	Member
6.	Dr. P. D. Bhamre	HOD IT	Member
7.	Dr. P. B. Kushare	HOD Mechanical	Member
8.	Dr. S. N. Jain	HOD Chemical	Member
9.	Dr. A. C. Pawar	HOD Science	Member
10.	Dr. V. C. Bagal	HOD MCA	Member
11.	Dr. S. P. Dhake	HOD MBA	Member
12.	Dr. R. K. Munje	HOD Electrical	Member Secretary

The research committee is constituted at institute level involving qualified and experienced faculty to monitor and address the issues of research.

#### **Research and Development Budget:**

To promote research and development activities among faculty members and students to develop new technologies and facilitate technology transfer, the institute provides the dedicated budget under 'Research and Development Activities', yearly for each department. Accordingly sanctioned, budget is utilized for salary of project staff, purchase of new equipments, consumables, travelling (domestic, international), purchase of books and e-resources.

#### **Procedure for Research Work:**

- 1. **Research Idea:** Generate a list of best ideas from your research area in which you are interested. Principal Investigator (PI) should consider professional interest in identifying new and important research questions. Organization of brainstorming with a group helps in terms of idea mapping. Moreover, identifying ideas that are innovative in which you will be comfortable requires refinement of your research idea in terms of its implementation within the availability of resources. The department concerned will establish an internal review panel as a team to discuss the efficiency of the proposed study. The team will concentrate on the improvement of the scientific content of the proposal.
- 2. **Funding Agency**: One needs to learn about the funding agency in terms of its mission, research priorities, available financial resources, recent awards and current announcements. Faculty should initiate interaction with the research coordinator and seek required information on matching the research Idea and objectives of the agency. Faculty should visit the funding agency, if necessary, voluntarily to serve on the review panel. Faculty needs to read and analyze the solicitation of the agency's grant application.
- 3. Ethics/ IPRs: Funding agencies are concerned with ethical issues of scientific experimentation on humans, animals, etc. PIs are responsible for upholding academic integrity.
- 4. Viable research budget and term: It consists of direct and indirect costs of the proposed study. Moreover, provide rationale for each budget item within the lines of

the objectives of the study. It is advisable to seek assistance from the concerned staff of the institute. It is necessary to check your calculations before you submit it to the funding agency.

### **Research Proposal Contents:**

A research proposal for a funding agency typically follows a structured format to clearly convey the research idea, objectives, methodology, and expected outcomes. Below is a standard structure:

**1. Cover Page:** It should have the Title of the Proposal, Name of the Principal Investigator (PI) and Co-Investigators (if any), Affiliation and Institution Details, Contact Information, Funding Agency Name and Scheme Details and Date of Submission

**2.** Abstract: It should have a concise summary of the research problem, objectives, methodology, expected outcomes, and significance. (Typically, 250–300 words)

**3. Introduction:** It should have the Background and Context of the Study, Statement of the Problem, Research Gap and Need for the Study, Objectives of the Research, and Hypothesis (if applicable)

**4. Literature Review:** It should have a Summary of existing research related to the topic, Identification of research gaps, Justification for the proposed research

**5. Research Methodology:** It should have Research Design (Experimental, Theoretical, Computational, etc.), Data Collection Methods (Surveys, Experiments, Case Studies, etc.), Tools, Equipment, or Software to be Used, Sampling Method (if applicable), Data Analysis Techniques, and Expected Challenges and Mitigation Strategies

6. Work Plan and Timeline: It should have a Breakdown of research activities into phases, and a Gantt Chart or Timeline Representation

7. Expected Outcomes and Impact: It should have Key results anticipated, Potential academic, social, or industrial impact, and Application of findings (e.g., patents, publications, product development)

**8. Budget Estimation:** It should have **a** Justification of funding required and breakdown into categories such as Equipment/Materials, Manpower, Travel (Field Visits, Conferences), Contingency, and Institutional Overheads (if applicable)

**9. Institutional and Research Team Details:** It should have PI and Co-Investigators' Expertise and Roles, Institutional Facilities and Support Available, and Collaborations (Industry/Academia)

**10. References:** It should have Proper citation of all referenced works using a standard format (APA, IEEE, etc.)

**11. Appendices (if required):** It should have CVs of PI and Co-Investigators, Ethical Approval (if applicable) and Letters of Support from Collaborators

#### **Promoting Research Culture:**

Looking into the diversified interests of the faculty members and their experience and expertise in respective fields it has become essential to set up rules and regulations for promoting research culture at the institute level. The following strategies are made for the benefit of an individual faculty member, department and the institute as a whole.

• All departments are encouraged to prepare strong proposals of research work to be carried out in the department involving the faculty members, Postgraduate and Doctoral students of the department.

- Departments should also collaborate with sister institutes of K. K. Wagh Education Society to undertake multidisciplinary research projects considering societal needs.
- Every department is expected to have information about various research project funding agencies / institutions/ industries etc. (like AICTE, DST, UGC, CSIR laboratories, DRDO/BCUD various national and international schools with collaborative projects, Ministry of Communications and Information Technology, Ministry of Non-Conventional Energy Sources, etc.)
- There should be strong research understanding between departments and the abovementioned institutions along with MOU signed for collaborations and projects. The effectiveness of the MOUs over the performance of the department shall be the responsibility of concerned HOD.
- It is expected that every Doctoral student (registered at K. K. Wagh I.E.E & R) along with the supervisor should submit one proposal to government funding agencies with K.K.W.I.E.E. & R. as place of research where equipment/facilities will be installed.

### **Types of Research Projects:**

## 1. Multidisciplinary Research Proposals:

Multidisciplinary projects taken up by researchers from engineering college in collaboration with researchers from other institutes run by K. K. Wagh Education Society will be considered for funding in following categories:

- a. Self-sponsored multidisciplinary project: The project funded by one of the institutes of the researcher participating in the project.
- b. Joint sponsored multidisciplinary project: The project will be funded by two or more institutes run by K. K. Wagh Education Society which are involved in execution of the research project in suitable proportion decided mutually by the participating institutes.
- c. Multidisciplinary research projects sponsored by K. K. Wagh Education Society: Any multidisciplinary project taken up by various institutes run by K. K. Wagh Education Society may be considered for funding by the Education Society itself based on the objectives, technologies involved and providing solution for societal problems.
- d. External funding for multidisciplinary projects:
  - The researchers of various institutes run by K. K. Wagh Education Society involved in multidisciplinary projects may approach different NGO or sponsors for getting funds for the project with prior approval of the K. K. Wagh Education Society.
  - The researchers of various institutes run by K. K. Wagh Education Society will be encouraged to apply for various Government funded agencies like UGC / AICTE / DST / Ministries of Central Government and other such bodies for funding their research projects.

All the multidisciplinary research proposals will be scrutinized by an expert committee constituted by K. K. Wagh Education Society for this purpose. The nature of funding and release of amount will be based on the recommendations of the expert committee.

## 2. Sponsored Research Projects:

The institute provides information regarding various funding agencies and schemes, announced by central and state government to faculty & supports them to prepare & submit research proposals.

Sponsored project refers to one in which the Principal Investigator (PI) does not charge honoraria/consultation fee. For a project sponsored by a government agency, no honorarium in any form can be claimed. The amount may be used by the principal investigator as approved in the respective budget head by the funding agency.

## 3. Individual projects:

The institute encourages investigation of basic and applied areas of science and technology, high end technology development individually. Research grants for such projects are given by government agencies and industries (both national and international). These projects are usually of 2-5 years duration with periodic appraisals, while research objectives and goals may be refined along the way.

#### 4. Collaborative projects:

Faculty may also participate in collaborative projects with other domestic or foreign partners. In such projects, there must be a separate budget and scope of work statement to be made by the faculty and staff of the institute. The summary statement provided to the institute should be based primarily on the portion to be made by the institute. The institute will treat this like any other sponsored project.

The additional fund for purchasing small equipment, stationery, consumable materials in laboratory etc. which is not considered in budget of project will be provided by institute to promote research activity/work/project. This will be maximum up to 20% of the research grant obtained.

### Utilization of Funds (How it is utilized):

- 1. After receiving the research grant, the institute releases the funds as per the demand of the principal investigator. An additional amount, if required, is given by the institute up to maximum of 20% of the research grant. The institute has well equipped laboratories, adequate internet facility and library resources to carry out investigations dealing with research projects. The teaching load of the principal investigator may be adjusted during research work. The institute has appointed an Academic Research Coordinator (ARC) for the University. The accounts section helps to carry out timely audit and preparation of utilization certificate.
- 2. The institute, soon after receiving the sanction letter from the Sponsoring Agency allows the Project Investigators to initiate the project work by duly hiring the personnel (if necessary) spending on consumables, using the infrastructure and resources of the institute, in anticipation of the release of the Funds.

#### Utilization of financial Assistance:

Sr. No.	Item	Description	Individual Sub head cost
1	Permanent Equipment		
2	Equipment's on lease		
3	Temporary Equipment's		
4	Materials required		
5	Manpower		
6	Consumables		
7	Travel		
8	Overhead charges		
9	E-resources		
		Grand Total (Rs.)	

Utilization certificate is to be submitted in following format or format provided by the funding agency:

## Accounts:

- The money received through research grants is parked in the current account held by the institute and the institute does not earn any interest on the grants received, neither the institute/individual charges any interest from the funding agencies in case of delay in reimbursement of expenditure or transfer of the Funds pledged by the agency towards the execution of the projects by the principal investigators of institute.
- A consultancy project/task/work is one, where faculty and research staff provides knowledge and intellectual guidance to industry (within India/outside India), primarily for their purposes. This is effectively a contract work in which all outputs belong to the sponsor.
- A MoU/agreement that satisfies all the conditions, particularly of the overheads, service tax will be approved by the institute. Any deviation from the norms (e.g. reduction of overhead) will have to be discussed and explicitly approved.
- When MoU is verified for legal issues by the law section of K.K.Wagh Education Society, Nashik and acceptable to both the parties, it is sent to the Principal, K.K.W.I.E.E.R for approval along with the Note File
- After approval, Principal Investigator/HOD as the case may be along with witness sign the MoU.
- After completion of the project, the final report should be submitted to the funding agency.
- A completion certificate should be obtained from the funding agency for successful completion of the project based on which project account will be closed.

## Equipment:

Major equipment in the areas of research where a long-felt need exists or for new thrust areas of research is the main focus of the committee for acquisition of research equipment scheme.

Proposals for purchase of major research equipment are invited from or a group of faculty members drawn from across the institute.

## **Recruitment of Research Fellow:**

For having grant from Central or State government and having provision for recruitment of research fellows guidelines of State / Central Government are followed by institute.

The appointment of Research Fellows is done by inviting applications from eligible candidates. Selection is done after conducting written tests and interviews for the shortlisted candidates.

### **Publications:**

The rich outcome of the research endeavors can be seen in large publications and number of books. The strong academic environment prevailing on the campus encourages faculty members to write research papers and books in the area of their expertise. Following the practices across the world, books authored by faculty or research staff are not treated as projects or consultancies. Royalties received for books authored by faculty/staff members will not be shared by the institute. Such authors of the books are expected to donate copies to the central library. Staff members and Ph.D. students should use the affiliation of the institute (besides their parent institute - if applicable) while publishing the research articles.

All researchers will submit a copy of their research publication to the Central Library of the institute.

## **Interaction with Eminent Researchers:**

The research and development committee of the institute regularly invites renowned personalities for motivation and inculcating research among faculty and students. Number of researchers and scientists visit our institute regularly. Expert lectures and keynote sessions of all these personalities motivate the faculty and students for research in frontier areas of technology and interdisciplinary research etc. Faculty and students obtain advanced knowledge from such sessions that eventually will result in new or improved products, processes, systems etc. which is one of the major objectives of such visits. Institute provides accommodation facilities for all visiting scientists / research scholars in the guest house which is equipped with Wi-Fi and computing facilities available on 24x7 basis. Suitable remuneration and TA/DA will be provided to the visiting scientists as per the institute policy.

