

POLICY PAPER

NATIONAL RESEARCH PROGRAM FOR UNIVERSITIES

NRPU is a flagship Research Programme of HEC for funding high-quality and promising scientific research projects that demonstrate strategic relevance and impact to local industry and society. The NRPU is anticipated to support proposals that promote innovative, interdisciplinary and solution focused research.

1. Research Domains

NRPU funds allocation will be categorized in two (02) research domains as follow:

- a) Basic Research Grant (30%)
- b) Commission's Strategic Research (70%)

a) Basic Research Grant (30%)

Key features :

- Support basic research in all disciplines.
- Funding limit range upto PKR. 20 million
- Project Duration upto 24 months maximum

b) Commission's Strategic Research Grant (70%)

Under the Commission's Strategic Research, the grants will be allocated in two sub-domains as mentioned below :-

(i) Thematic Applied Research

The applied thematic research grant is focused on supporting the research and innovation in priority thematic areas of national interest to address local challenges. The Applied research will support large, multisectoral/ multidimensional research projects. This component mainly supports research projects that address locally relevant socio-economic issues by addressing the topics associated with the Sustainable Development Goals (SDGs).

Key features :

- Funding limit may be higher than PKR. 20 million subject to the contribution from industry
- Project Duration will be up to 24 months maximum
- The preference will be given to proposals projecting academia-industry joint ventures, and contribution from industry (in kind or financial) leading to product development or services which solve a current problem or identify a new opportunity.
- Projects must have a sustainability plan
- Distinction/ Recognition awards will be given by HEC for innovative projects with exceptional products / services

Broad Priority Thematic Research Areas are:

1. Health, Wellbeing, and Biotechnology

- Diagnostic kits
- Drug and vaccine development
- Biotechnology applications in health
- Prevention & treatment of diseases specific to the geographical location of Pakistan

2. Digital Technologies and Cyber-Physical Systems

- Artificial intelligence (AI)
- Internet of Things (IoT)
- Cybersecurity
- Chip manufacturing and Semiconductor technology

3. Sustainable Energy and Transportation

- Electrical Vehicles (EVs)
- Energy storage devices (e.g., battery cells)
- Renewable and sustainable energy solutions

4. Smart and Sustainable Agriculture

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- Smart agriculture
- Farming technologies
- Agricultural engineering

5. Climate Change, Environmental Management, and Sustainability

- Climate change mitigation and adaptation
- Waste management
- Urban planning and sustainability
- Water management

6. Advanced Materials and Industrial Innovation

- Chemicals and materials for industrial use
- Minerals extraction

7. Governance, Policy, and Societal Innovation

- Innovative governance and reforms
- Policy development using AI and data analytics

(ii) **Solicited Applied Research**

Under this domain, the projects based upon the specific problems faced by a particular industry or any technological advancement required by that industry targeting major imports or exports of Pakistan will be entertained.

Key features

- Funding limit may be higher than PKR. 20 million depending upon the contribution from the industry
- Project Duration up to 24 months maximum
- A specific problem will be identified by the relevant industry
- Problem solving Academia-Industry joint ventures leading to product development/enhancement or services which solve a current problem or identify a new opportunity.
- Contribution from industry (in kind or financial) is mandatory.
- Researcher/ students training with relevant industry should be included.
- PI will carry out research activities at the mentioned industry for at least 3-6 months. For this purpose, the university will grant him paid leave.
- Projects must have a sustainability plan

Identification of Research Problem/questions

- Meetings with industry experts/chambers will be conducted to discuss the specific problems/ issues faced by the industry.
- Requests from industry will be invited for research on the problems/topics of their interest.
- Research problems will be finalized in Joint meeting of Scientific Review Panels and / HEC Authorities for next call of NRPU under solicited applied research grant.

2. Applicants Eligibility:

- The Principal Investigators (PI) must be a faculty member (PhD or FCPS/MCPS/FRCS) working on regular/ contract basis (contract duration must not be less than the project duration) in the Higher Education Institutions (Public or Private) of Pakistan.
- PI can hold only one NRPU grant at a time.

- Project Team may include :
 - A consortia of faculty members from multiple university departments and/or multiple universities
 - Private sector participants (No financial transactions will be made to private collaborators)

3. Proposal Submission Procedure:

Applications on prescribed template along with the requisite documents must be submitted by the PI and Head of ORICs/ Head of Research at the respective HEI will endorse the submitted application via HEC online portal (research.hec.gov.pk)

Project proposal should cover:

- i. Problem statement
- ii. Objectives of the projects and alignment with national priorities/local problems
- iii. Work already done by PI or others on the proposed study
- iv. Overview of project team including internal & external collaborators/Expert (Ministries, allied departments, other institutions, NGOs, Industry)
- v. Plan for gaining commitment from your proposed partners.
- vi. Beneficiaries of research outcomes and what will be delivered by proposed study which will not otherwise realized.
- vii. Identification of outcomes of proposed study
- viii. Sustainability plan beyond the duration of the grant

4. Evaluation & Award Mechanism

- i. The proposals will undergo for the i) initial administrative scrutiny, ii) Blind review by the Review Panels based on evaluation criteria, iii) Detailed peer/ panel review after being shortlisted by the blind review.
- ii. In detailed review, the proposals qualifying minimum threshold will be evaluated by the scientific review panels for further decisions of recommendation/ non-recommendation. The panels may suggest revisions in the recommended proposals which must be incorporated by the Principal Investigator (PI) before final endorsement.
- iii. The scientific review panels will assign merit to the recommended proposals for consideration of the HEC's Competent Authority
- iv. The Competent Authority of HEC may approve the proposals for funding based on Panels' assigned merit scores and subject to the availability of funds within the financial year. The approval and issuance of Award letters will take place accordingly.
- v. The funds may be re-appropriated within the two (02) proposed research domains as and when necessary.
- vi. The post-award monitoring and evaluation till the completion of the project will be ensured.