

## Call for Proposals

### Research and Innovation Grants in Engineering 2023/2024

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#### **KENET's Research and Innovation Grants Overview**

KENET has as one of its mandates, the role of catalysing collaboration in research and education among member universities and research institutions. KENET promotes collaboration through facilitation of Special Interest Groups (SIGs) in priority academic areas, discovery of active researchers/faculty, provision of research grants to researchers and member institutions, as well as travel grants for faculty and/or graduate students in SIG areas.

Research and Innovation are important pillars in the development of any society. For Kenya to industrialise and improve the well being of her people, increasing investment in research and development within Engineering is a must. This call seeks to fund research in engineering with great potential for impact in Kenya.

Building on the 2022 call, we seek to fund projects that will support or lead to the establishment of vibrant multidisciplinary research groups in engineering disciplines including but not limited to Electrical Engineering, Civil Engineering, Mechanical Engineering, Mechatronic Engineering, Chemical Engineering and Biomedical Engineering as applied to three focus areas described in the next section.

#### **Research and Innovation Grant: Areas of Focus**

The areas of focus for this round of research and innovation grants:

1. Engineering Solutions in Health (ESH)
2. Engineering Solutions in Climate Change Mitigation (ESCC)
3. Cross Cutting Applications in Engineering (CCAEE)

#### **Area of Focus: Technical Overview**

##### **1. Engineering Solutions in Health (ESH)**

Proposals in this focus area will conduct research aimed at developing, prototyping, or investigating engineering-based solutions to healthcare challenges. Areas of interest include but are not limited to:

1. Diagnostic systems for neglected diseases
2. Biomedical engineering applications
3. Assistive technology

##### **2. Engineering Solutions in Climate Change Mitigation (ESCCM)**

Food scarcity and climate change are major challenges in Kenya which reinforce each other. In this focus area we seek to fund proposals that lead to novel engineering-based approaches to climate change mitigation. Areas of interest include but are not limited to:

1. Precision agriculture

2. Environmental monitoring
3. Farm mechanization

### 3. Cross Cutting Applications in Engineering (CCAIE)

Under this focus area we seek novel engineering-based approaches to solutions in areas such as:

1. Infrastructure
2. Manufacturing
3. Optimisation of cottage industry processes

This focus area for teams to propose novel research projects not captured in earlier

## Grant Structure

### KENET Research and Innovation Grants Structure

1. Four (4) grants will be awarded for the 2023/2024 round of funding.
2. Each innovation grant will be for a maximum of KES 1.5 million
3. The grant period is 12 months.

## Eligibility, Terms and Conditions

### Eligibility

Applicants must

1. Have a PhD in one of the engineering disciplines awarded within the last 10 years.
2. Not have received prior research support from KENET
3. Have an existing research team or show proof of the ability to establish a research team at their university. This team must include full-time postgraduate students.
4. Be based at an accredited engineering program at a Kenyan university with active postgraduate programs.
5. Show a track record of postgraduate student supervision.
6. Have published work in peer reviewed journals and conferences indexed in Scopus or Web of Science in the past 12 months.
7. Obtain written approval from the Head of Department and Dean/Director of respective school of engineering.

### Post-Award Requirements

The successful grantees will be expected to:

1. Provide quarterly progress reports to the Engineering research associate at KENET
2. Prepare quarterly blog posts on research work for posting to the KENET website.
3. Participate and present project work at selected meet-ups organized by KENET
4. Grow a community of improved research practice.
5. Actively seek funding to further their research work by writing (joint) funding proposals to other agencies
6. Prepare a final project report at the end of the grant period and submit it to KENET
7. Prepare an abridged version of the project report for profiling on KENET's and institutional websites.
8. Publish paper(s) on their work in reputable journals. These papers should acknowledge the KENET grant.

## Proposal Submission

We expect proposals to include the following sections;

1. Abstract
2. Justification - this section should introduce the research area and explain why it is an important research problem.
3. Methodology - Clearly explain your technical approach and cite appropriate literature.
4. Team description - we expect all research to be conducted within a research group. Describe your existing or proposed research group.
5. Ethics and Data sharing statement - Explain any ethical aspects of your work as well as how you will share data generated by your project
6. Timeline - include a realistic work plan with associated timeline
7. Budget (Up to KES 1.5 million ) and budget justification.

Proposals must adhere to the word limits stated and must not exceed 10 pages including figures and references.

To give your proposal a good chance of success, we would like to stress the importance of clear and concise writing. We also recommend the following resources:

1. Kraicer, J. (1997). The art of grantsmanship. Online: [https://medecine.umontreal.ca/wp-content/uploads/sites/8/2015/01/CatalogueAteliersFacMed\\_ICM\\_Annexe1.pdf](https://medecine.umontreal.ca/wp-content/uploads/sites/8/2015/01/CatalogueAteliersFacMed_ICM_Annexe1.pdf)
2. Bourne, P. E., & Chalupa, L. M. (2006). Ten simple rules for getting grants.

## Supporting Documents

The following documents should be included as part of the proposal submission:

1. Team profile document, indicating the names, institutional affiliation and brief biographies of the lead researcher(s). Details of other team members and any collaborating institutions should also be included in the team profile.
2. CVs of the lead researcher(s), clearly profiling research activities undertaken to date as well as relevant publications.
3. Letters of Commitment from team members and any collaborating institutions.

## Proposal submission

Proposals with all supporting documentation should be sent via email to [edutechgrants@kenet.or.ke](mailto:edutechgrants@kenet.or.ke) on or before 14<sup>th</sup> July, 2023 5.00 PM East African time

## Enquiries and applicant support

All enquiries and requests for further information related to this call should be addressed to [grantsadmin@kenet.or.ke](mailto:grantsadmin@kenet.or.ke)

## Proposal Evaluation

### Evaluation Criteria

Proposals will be evaluated on

1. Relevance of the proposed research
2. Ability to deliver on proposed work - does the team have the required expertise.
3. Team composition with demonstrable ability to mentor postgraduate students.
4. Institutional support - is there support for the proposed activity from the host institution.
5. Integrity - plagiarism and other forms of academic fraud will be grounds for disqualification.
6. Sustainability - is this work able to attract further research funding.

Table 2 shows elements of this evaluation in greater detail.

Evaluation Criteria	Evaluation Aspects	Weighted Score
Justification	Is the proposed project relevant to engineering? Is the research area current and relevant in the Kenyan context? Does the work have the potential for significant impact?	10%
Contribution	Is the contribution of the work clear? Does the work fill a clearly identified research gap	10%
Methodology	Are the methods appropriate and adequately described?	30%
Team composition	Does the team possess the technical skills in the area of focus? Are postgraduate students involved in the work? Is there a track record of postgraduate student supervision?	20%
Student support	Is there an adequate mechanism to ensure postgraduate student progress?	10%
Community engagement	Will the team create a community of research practice in the chosen discipline? Will the team share data and research outcomes? Is the mechanism for dissemination clear?	10%
Sustainability	Is there potential for future funding?	10%

**Table 2: Evaluation Criteria**

## Evaluation Process

1. KENET will constitute a review panel of leading engineering experts. Members of the review panel will sign Non-Disclosure Agreements, as well as statements acknowledging that they will make no claim to the intellectual property developed by the grantees.
2. The reviewers will review all received applications as per the evaluation criteria provided in Table 2, and select the top six (6) proposals.
3. The top six (6) finalists will be invited for a final face-to-face presentation. During the oral presentations, the applicants will respond to and clarify any questions from the panel that will have arisen out of their written submissions. They will also be required to respond to any ad-hoc questions arising from the oral presentation.
4. After the oral presentations, the reviewers will make their final decisions on which four (4) proposals will receive the grant.
5. Selected grantees will be notified formally and profiled on KENET's website.