



Invitation to tender for a "*Centre of Excellence in ICT in East Africa*" for the establishment of a master's programme in Embedded and Mobile Systems

What are the goals of the project?

The current call for tender for an East African-German University Partnership and joint development of a master's programme in Embedded and Mobile Systems in East Africa is part of the German Technical Cooperation (TC) Project "Centre of Excellence in ICT in East Africa". This project is embedded in bilateral development cooperation between Germany and the East African Community (EAC) to support regional economic integration in East Africa. In this context, further training offers and equipment are provided additional to the destined funding instruments and activities included in this call for tender.

The project is funded by the Federal Ministry for Economic Cooperation and Development (BMZ). The lead implementing agency for technical cooperation on the German side is the German Society for International Cooperation (GIZ). The German Academic Exchange Service (DAAD) is the German partner for university partnership and the master's degree programme. Implementation partner on the East African side is the Inter-University Council for East Africa (IUCEA).

The project runs in line with the EAC's Vision 2050, the draft of the EAC ICT Strategy and several national development plans and ICT strategies of EAC member states, which emphasise the crucial role of ICT and digital innovation in all sectors. Capacity development in digital knowledge, competencies and skills are considered a priority in the region. Higher education plays a key role in generating the required human resources.

The primary goal of the project is for universities in East Africa to offer programmes and services that meet the requirements of private and public sectors as well as of civil society for a digital transformation in the region.

Therefore, the technical cooperation project will address the lack of qualified personnel. It contributes to continued capacity development in the region by establishing a personnel and structurally sustainable centre of expertise and training of qualified experts in the field of higher education as well as key areas in the development sector, by strengthening teaching in *Embedded and Mobile Systems* at East African universities in particular.

Orientation of this invitation to tender

For this purpose, a highly modern master's programme will be set up which will include general and specific modules in Embedded and Mobile Systems as well as the following practical elements:

- A sector-specific elective module;
- A four-week internship aimed at applying and deepening students' professional and interdisciplinary skills;
- One-semester practice-oriented master's thesis dealing primarily with problems in ICT-related work areas from the private or public sector;
- Generic courses for interdisciplinary competencies (e.g. soft skills, management and entrepreneurship).

For this course, the establishment of at least 40 places to study per cohort is expected. Special consideration will be given to female students.

A further result of the project is that staff of the selected guest university to be selected will be trained professionally, didactically and administratively by means of training measures.

To ensure the centre's operational capability, further special trainings including for technical staff and equipment are designed out of funds of the overriding GIZ programme, without being part of this invitation to tender.

Regional and international cooperation with political, economic and civil society protagonists will be a core element of the project.

This master's programme will be established as a bilateral cooperation between a University in East Africa and a German partner university (or a consortium of German partner universities) within the framework of DAAD's Africa Strategy, complementing the existing DAAD funded African Centres of Excellence Programme (www.african-excellence.de). It will aim at synergising with other centres (e.g. World Bank-funded African Centres of Excellence) and development programmes in the region.

The "Centre of Excellence in ICT in East Africa" and the aforementioned master's programme will be implemented at an EAC member state university. The university in East Africa should have regional networks and a clear focus on cooperation with private and public sectors as well as civic public engagement. It should be explicitly dedicated to serving socio-economic integration and the development agenda of the region. A German university (or a consortium of German universities) shall support capacity development in the area of Embedded and Mobile Systems. In the medium term, the establishment of a double degree programme (with reciprocal recognition of educational modules between the German University and the University in East Africa) is conceivable.

The East African and German partner university/universities will be selected on a competitive basis. The competition will be coordinated by IUCEA and DAAD.

The Higher Education co-operation project will be accompanied by indicator-supported and impact-oriented monitoring. A survey of practice-supervising organisations regarding the conformity of the professional competence profile of master students with the company's requirements is mandatory. Participating universities will be expected to align their annual reporting according to the requirements of this monitoring. The programme indicators listed in annexe 5, as well as project-specific indicators, are subject to annual reporting. Universities with funding approvals will receive all documents required for this purpose by submitting the funding contract.

In addition, the annual reports have to provide a description of how the funded partnership is contributing to the achievement of goals and to the outcome of the project.

Who can apply?

The following institutions are entitled to submit a joint application:

- a German university (or consortium of universities) in conjunction with an accredited university within the East African Community
- an accredited university within the East African community in conjunction with a German partner university (or a consortium of German universities).

What is funded?

The establishment of an application-oriented, modular 2-year master's programme in "Embedded and Mobile Systems" will be funded. Close collaboration with the industry (and other stakeholders) is an essential feature of the partnership.

The master's degree programme shall incorporate practice-oriented projects as well as integrated learning (e-learning components, e-labs) and master's theses (in cooperation with the national or regional private or public sectors). It shall have a practical application orientation to relevant topics of the region and of the African continent. The programme shall comprise soft skills and generic competency modules (e.g. management, administration, entrepreneurship, solution orientation, creative thinking).

Funding measures:

The following measures and activities may be funded in order to ensure achievement of the project objectives (please see the regulations for funding described in the attached guidelines, annexe 1):

Project coordination

- Allocation of administrative staff and materials to coordinate the partnership

Academic activities

- Curricula development (e.g. workshops etc.) with involvement of stakeholders from the private and public sectors
- Adaptation/contextualisation/development of e-learning courses
- Summer School (in collaboration with German enterprises and/or enterprises in the EAC region)
- Supervision of master's theses
- Job service /internships (as a mandatory module within the curriculum)
- Providing e-learning
- Workshops and conferences
- Short-term lectures at the East-African partner university
- Exchange of students between German and African universities
- Exchanges within collaborative research and innovation projects

Scholarships

- Research funding on a small scale (mainly for master's theses)
- Scholarship for students participating in the master's programme "Embedded and Mobile Systems" (sur-place and in the EAC area)

Infrastructure and equipment

- Infrastructure and facilities on a small scale at the partner universities

Marketing

- Marketing and measures for recruitment
- Awareness raising campaign

Funding period:

The planned funding period is from October 2017 until December 2020.

Funding:

A maximum of 1,387,000 Euro is envisaged for funding the above mentioned measures for the entire funding period.

The project will be funded under full financing.

Which subjects are eligible?

As the programme has an interdisciplinary approach, related disciplines may apply for funding (e.g. Computer Sciences, Informatics, Electrical Engineering).

Which target groups will be funded?

The project mainly targets graduates with a first academic degree (Bachelor or equivalent) in Science, Technology, Engineering and Mathematics (STEM) as well as professionals working in academia, industry or the public sector.

The project especially targets an increased enrolment and promotion of women, since they are still underrepresented in STEM-related studies and engineering.

It also addresses unemployed graduates who are striving for further qualifications in the field of Embedded and Mobile Systems.

What conditions should be met?

The following basic pre-requisites are relevant for the application:

- A timetable envisaging the first activities of the partnership of universities beginning in October 2017 (after successful selection and execution of the contract with the DAAD and IUCEA) and enabling the start of the Master's courses latest in September 2018

Application procedure

The **complete, joint applications** by the cooperation partners must be exclusively submitted **by the stipulated deadline** via the DAAD online portal (<https://portal.daad.de/irj/portal>).

The application must be endorsed by the leadership of the university at both sides. The application has to be in English.

The application's countersigning by all project partners is mandatory. (see annexe 9 and 10).

Application documents relevant for selection:

1. Project Concept consisting of:

- a) Description of the initial situation/background, personnel deployment, planned activities (activities), cooperation projects with the private sector and other project participants, strategies for internships (10/2017 to 12/2020);
Brief description of a marketing and recruitment strategy to attract qualified students from the region (including a strategy for bridging courses, where necessary) and to include qualified staff from the area.
- b) Outline of the course contents (first draft of structure and content of the planned master course);
- c) Description of the expected results (impact) of the project with a description of which project-specific outputs should lead to which outcomes. Please indicate when and by whom which project activities should be implemented to reach the outputs. The outcomes, outputs and activities must be transferred to the project planning overview (annexe 6). There, one or two meaningful indicators must be added that are suitable for specifying and measuring outcomes and outputs of the project. For further information, please refer to the "Guideline for results-oriented monitoring (RoM)" (annexe 3).
- d) Outline of the partnership and its activities with regard to its embeddedness in the digital transformation and ICT Ecosystem in the region, the strategy to foster innovation and entrepreneurship, reference of the contribution of the project to achieve sustainable goals as to development and socio-

economic regional integration within the East African community.

2. Information about the project partner:

The German partner institution/s and the University in East Africa which will conduct the master's programme Embedded and Mobile Systems shall provide the following information:

- a) An overview of previous international co-operations and industrial collaboration and results of the cooperation (if applicable);
- b) Available academic staff and lab technicians as well as infrastructure at the university with reference to ICT and entrepreneurship. The commitment of the university providing the master's programme, infrastructure and human resources, should be clearly indicated.
- c) Information on existing networking contacts with private and public sectors as well as with civil society, if applicable.

3. Information regarding the arrangements already made with the respective partner (copies of contracts or agreements).

4. If applicable, a brief description of other current or concluded projects and activities of the applicant, which are substantively related to the project applied for on the basis of the participating partners.
5. A **financial plan of the whole funding period** including calculation of the planned revenues and expenses of the universities. Use the financial plan at the DAAD portal and take the "Instructions for filling out the financing plan" (annexe 7) into account.
6. An **alumni concept** taking required sustainability and networking approach into consideration.
7. A **staff development plan** for academic, administrative and technical staff at the host university, taking required sustainability (e.g. measures for staff retention with particular focus to ICT and Embedded and Mobile Systems) into consideration.
8. A **concept for sustainability of the master's programme and the university partnership** beyond the funding period (including cooperation with private and public sectors, both financially and structurally).
9. A **schedule** for planned measures/activities within the preparatory and implementation phases. Scheduling shall enable the start of the Master's course in September 2018.

The application – including all documents mentioned above – must be submitted by 31st July 2017 to DAAD as described above. The above mentioned application documents relevant for selection are mandatory documents which have to be submitted by the application deadline. The documents to be submitted have to be named and numbered according to the numbering stated above.

After expiry of the application period, the DAAD will not request further documents nor accept missing documents, additional documents or amendments (this also applies to the financing plan). Incomplete applications will be excluded from the selection procedure.



Further important information on mandatory specifications as to the relevant application can be found on the DAAD website (project-funding programmes).

Deadline

The application deadline is 31st July 2017.

What are the selection criteria?

Selection takes place through one of DAAD and IUCEAS' selection committees ordered as partner organisations consisting of experts from the academic sector.

Selection Criteria:

1. Relevance of the project for the achievement of objectives (innovative character to promote capacity development, employability, entrepreneurship and regional socio-economic development and integration);
2. Suitability of the University in East Africa and its environment for an international and regional cooperation project with staff and student exchange as well as regarding its potential to collaborate with industries on a local and regional basis, economic resources, existing IT infrastructure, availability of a base of qualified academic staff in the subject area;
3. Existing expertise by both partners in the field of Embedded and Mobile Systems;
4. Cooperation experience with potential partners from private and public sectors and civil society in East Africa or Germany;
5. Integration potential within existing key sectors in German development cooperation; Potential of linkage to existing cooperation programmes and initiatives in the region;
6. Plausibility of budget planning and efficient use of funds;
7. Potential for regional upscaling and impact;
8. Concepts supporting inclusion, gender equity and consideration of social aspects.

Particularly eligible for funding are furthermore projects:

1. that focus on a sustainable institutional partnership;
2. that have active support for the project execution by respective decision makers at the partner universities and which can show a verifiable commitment (including of the host country), measurable by indicators
3. that aim to achieve high national, regional and international visibility;
4. that have a comprehensive personnel development concept (for capacity development of academic, technical and administrative staff, as well as leadership);
5. that have developed a strategy of sustainable financing (which, for example, involves the development of sustainable prospects for other financing options and sources of income after the end of DAAD support);
6. that present their strategy/plan of action with the industry and other project participants.
7. that can show experience with Embedded and Mobile Systems (teaching at university level, applied research, technology transfer and/or innovation), preferably with international orientation and which preferably already dispose of incubators and/or learning factories.

Contacts and further Information

The selection by an international external expert commission is planned for end of August 2017 and shall provide a clear ranking of the three highest-rated projects. In the following, the Universities in East Africa targeted by the three highest-ranked concepts will be

visited by two representatives of the selection commission. This is to assess the suitability of the targeted universities especially in relation to the commitment of the university's leadership, human capacity and ICT strategy. This assessment shall take place between 4th and 9th of September 2017.

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Annexes to the tender

1. [Funding Guidelines \(including funding framework and requirements\)](#)
2. [Results-oriented monitoring, Information sheet for universities](#)
3. [Guideline for results-oriented monitoring \(RoM\)](#)
4. [Results framework for the Centres of African Excellence Programme](#)
5. [Catalogue of indicators for the Centres of African Excellence Programme](#)
6. [Project planning overview](#)
7. [Instructions for filling out the financing plan \(in German\)](#)
8. [Fees for projects in foreign countries \(in German\)](#)
9. [Endorsement of the German University \(in German\)](#)
10. [Endorsement of the foreign University](#)



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