Call for applications for 2 PhD candidates positions in Biomedical Engineering under the BCDI 2030 scholarship program

September intake, 2025

1. Background

The University of Rwanda – Centre of Excellence in Biomedical Engineering and eHealth (UR-CEBE) in partnership with Western University, Ontario, Canada, through the BCDI 2030 (*Bourses Canadiennes de Développement International* 2030) scholarship program, received funding from Global Affairs Canada to establish a research project entitled: ***Building Capacity for Biomedical Device Innovation in Sub-Saharan Africa***.

2. Description

The research training sub-programme has a goal to support UR-CEBE in developing PhD training in biomedical engineering that will prepare African engineers for leadership roles in medical device innovation and entrepreneurship. The trainees' research will address inequitable access to healthcare caused in part by deficits in functioning medical technology by building capacity to establish a medical device industry within sub-Saharan Africa. It is in this regard that the UR cordially invites motivated candidates to apply for 2 PhD fellowships tenable at Western University, Canada, in the field of biomedical engineering starting September 2025. The PhD students will be registered at Western University, Faculty of Engineering, in the School of Biomedical Engineering. The training programme is four years in duration and will take place primarily in Canada. There will be an opportunity for the PhD candidates to complete the final few months of their project in Rwanda if that is appropriate to meet their research objectives.

The PhD training intends to develop scientific and technical skills, entrepreneurship skills, and preparation for university-level curriculum development and teaching to deliver caliber of biomedical engineering experts/researchers who will transfer knowledge to other Rwandans and regions, through provision of professional services, consultancy, R&D, and participating in implementation process of biomedical devices.

3. Funding

The study will be supported by the BCDI 2030 scholarship program

4. Application requirements

The PhD candidate is expected to demonstrate their interest in the area of biomedical devices, as well as to articulate plans for the research to pursue as part of their PhD studies and post-graduate career goals.

4.1.Eligibility

- Be a Rwandan Citizen
- Being a permanent staff member of the University of Rwanda

- Holder of a Master's degree or equivalent in the following areas: Electrical Engineering, Electronic and Telecommunication Engineering, Computer and Software Engineering, Mechanical Engineering, Biomedical Engineering with relevant knowledge in microprocessors and related electronics, optics, and/or artificial intelligence. Practical experience with 3D printing would also be an asset. Applicants should possess documented competence in areas relevant to the position, including research experience.
- Demonstrated ability to think and work independently and in a team
- Ready to adhere to UR capacity building policies and regulations
- Having interest and passion in biomedical device development (teaching, research, inter-institution collaboration for biomedical engineering related matters)
- In line with UR's gender policy and UR's commitment to bridge gender gap in academic (teaching and research) jobs; all things being equal, female candidate shall be preferred.
- Male applicants should not be older than 40 Years, while female should not be older than 45 years.

5. Application files

5.1.Key documents to be submitted by the applicant:

- An application letter addressed to the Director of the UR Centre of Postgraduate Studies
- A cover letter/motivation letter detailing commitment, statement of goals, objectives, and reasons for interest in the PhD scholarship
- An updated CV (maximum three pages), including a listing of possible previous scientific publications
- A certified copy of your highest degree, e.g., Master's degree/higher degree certificate, with a summary of the courses/subjects included in the degree (Academic transcripts)
- Other professional certificates if available
- A summary of degree projects/theses (no more than three pages)
- Three recommended names of referees with their detailed contacts
- Provide evidence of proficiency in writing and speaking English
- Your contact details and personal data

***Note*:** It is the responsibility of the applicant to ensure that the application is complete following the instructions in the call and that it is submitted before the deadline.

6. Selection

The selection among the eligible candidates will be based on their capacity to benefit from the training, and emphasis is placed on previous study results that must be demonstrated by academic work. This work must be an independent study/thesis at the advanced level (doctoral level). If the applicant has published in peer-reviewed journals, the published article/s can be enclosed with the application. The applicant must present his/her research plan in such a way that it is clear which research area/s the applicant wishes to associate with the planned research project.

In addition, the following criteria will be applied to assess the applicant's capacity:

- Independence in the analysis and organization of earlier work
- Problem formulation and rigor in previous work and in the research plan
- Previously shown ability to keep the specified time limits
- Methodological and scientific maturity
- Communication and cooperation skills
- Subject-specific knowledge relevant to education.

6.1.Research areas

The Doctoral education programme falls into multidisciplinary research and training programmes, including students from health and life sciences, information technology, computer science, design and engineering, and related fields. The PhD programme is unique and aims to nurture and prepare Doctoral candidates for successful careers and leadership that will span multidisciplinary research through innovative and technical solutions that address healthcare challenges and the role of technologies in healthcare systems. The research activities will be in close collaboration with partners from the healthcare sector, industry, and academia. The PhD candidate is invited to perform research on the following research theme:

- Trainees will design, implement, and perform field testing of cost-effective biomedical technologies designed to address the needs and constraints of healthcare systems in low-resource settings. Possible applications include devices for point-of-care diagnosis and treatment, user-friendly devices for calibration and validation of medical equipment, and technologies to support biomedical research or education. The project will apply the principles of frugal innovation and will take into consideration commercialization challenges and pathways for frugal medical devices, current issues in global and remote health, and equity considerations relevant to global health innovation.

7. Important Dates

- Application deadline: Applicants are requested to submit the required documents no later than **18 July 2025**.
- The shortlisted candidate will be invited to the Interview on the dates that will be communicated through their respective emails.

8. How to apply

All application files must be submitted in soft copy (zipped folder) and should be sent to **Ms. Gloriose Umulisa Gashayija,** Scholarships officer at UR-CPGS, through email: ur-cpgscholarship@ur.ac.rw, Tel: 07929 88304, and copy to **Assoc. Prof. Celestin Twizere** (c.twizere@ur.ac.rw). Applications must be received no later than **18 July 2025.**
5 pm Kigali time.

Done at Kigali, on 30/06/2025

Assoc. Prof. KAYIHURA Muganga Didas
Acting Vice Chancellor