



Call for applications for PhD by Research Programmes

Academic Year 2020/2021

The Management of the University of Rwanda is pleased to invite interested and qualified candidates to apply to study PhD programmes offered by the African Centre of Excellence for Innovative Teaching and Learning Mathematics and Science (ACEITLMS) based in the College of Education (UR-CE). Qualified candidates shall apply for the following programmes:

- PhD by research in Biology Education
- PhD by research in Chemistry Education
- PhD by research in Mathematics Education
- PhD by research in Physics Education

1. About ACEITLMS

The ACEITLMS is one of the four African Centres of Excellence (ACEs) supported by the World Bank. The main aim of the ACEITLMS is to strengthen human capacity in the delivery of quality teaching and learning of mathematics and science in Rwanda and across the region, in collaboration with regional and international institutions. The Centre's main activities are: (i) teaching, learning and training (ii) research and (iii) community outreach. For teaching and learning, the Centre is running PhD and Master programmes whose graduates are expected to bring quality and innovation into teaching and learning of mathematics and science, and application of STEM (Science, Technology, Engineering and mathematics) knowledge for economic development of the African continent. In this regard, the ACEITLMS will offer financial support to selected Rwandan and other African citizens to pursue studies in PhD (by research) in Biology, Chemistry, Mathematics and Physics Education programmes during the academic year 2020-2021.

2. Eligibility

Candidates applying for the ACEITLMS-PhD (by research) programmes should have a MSc degree in Mathematics or Science (Biology, Chemistry and Physics) with an undergraduate degree in Education or an undergraduate degree in mathematics/science subject(s) with a Master's degree in Education. The candidate must have sufficient knowledge of English, which will be the language of instruction; he/she should submit a PhD research concept note (refer to the appendix) clearly mentioning innovative aspects to mitigate current local and regional challenges in teaching and Learning Mathematics and Science, and in application of STEM knowledge to real life experience.

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3. Application requirements

- i) A detailed curriculum vitae of the candidate
- ii) Notarized copies of previous degrees/certificates (from High School to University) and transcripts
- iii) A motivation letter describing the candidate's motivation to join one of the programmes mentioned above.
- iv) Two letters of recommendation from Lecturers/supervisors from previous educational institutions,
- v) A recent passport sized photograph and a copy of ID (or valid Passport).
- vi) An abstract of Master's programme dissertation
- vii) A PhD research concept note describing the research problem, the purpose and objectives of the research, the methodology, expected outcomes and its expected impact in the area of study (see Format in Appendix 1).
- viii) Sponsorship letter from an organization (if any, added value to the application).

NB:

- Rwandan candidates who have completed their degrees/diplomas from foreign universities are required to submit their degrees/diplomas' equivalence provided by the Higher Education Council (HEC) of Rwanda.
- International applicants, upon admission will provided equivalence of their certificates from Rwanda Higher Education Council (HEC) after three months
- Female candidates and applicants with disabilities are encouraged to apply.
- Candidates who fulfill admission requirements will have to pass interview with the ACEITLMS.

4. Place of study

University of Rwanda- College of Education, Rukara Campus

5. Mode of attendance, duration and commencement

This PhD programme is a full time research study programme for a three-year period, maximum four years. The programme will start by September 14th, 2020. All students will be provisionally admitted and the final admission will be completed after approval of the research proposal by the appropriate organs of the UR-CE.

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6. Payments and fees structure for Postgraduate Studies

See the University fee structure downloadable from the University of Rwanda's website:
https://ur.ac.rw/IMG/pdf/fees_structure_2018_2019_combined-pivote.pdf

7. Opportunity for funding

ACEITLMS financial support

There are opportunities for financial support available on a competitive basis for selected candidates. Candidates who obtained the ACEITLMS financial support will initially be provided for one year. It may be renewable based on performance of the candidate and availability of funds. Such support will cover:

- Living cost, accommodation and local transport up to 6000 USD per year for regional students and 4800 USD per year for local students with an additional 600 USD for female candidates.
- Tuition fees as per UR fees structure (full or partial), and
- A round trip air ticket for some selected candidates from other African countries.

Self sponsored candidates are highly encouraged to apply.

1. Application process

- Go to UR Website (www.ur.ac.rw)
- Go to Admission, Applicant Portal and click to ([New Application](#))
- Fill the **Biographical Form** and click (**Save**) at the end you will get "**Your Student ID Reference Number**".

Please keep this ID Number as it will be your ID identification for all transactions at UR

- Create a PIN of 5 numeric digits, do not start with a 0 (This PIN will serve as your password to access your student account.)
- Candidates are requested to submit all required documents by using the link: pgfile.ur.ac.rw/pgfile/findme.php

N.B: All documents must be in PDF.

If all required documents are not submitted, you failed to go to the next step. When

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your submission succeeds, you will find a message in your email box.

9. Key dates

- i. Call for application: **21th May 2020**
- ii. Deadline of application: **26th June 2020**
- iii. Announcement for short listed candidates: **10th July 2020**
- iv. Interviews: **20th-24th July 2020**
- v. Final selection of candidates: **31st July 2020**
- vi. Registration for admission at UR-CE: **From 31th August– 4th September 2020**
- vii. Start of the Programme: **14th September 2020**

10. Notification of Selection

Selected candidates will be informed by email.

For any additional information, clarification or inquiry, please do not hesitate to contact:

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 - Dr Florien NSANGANWIMANA, Head of Research, ACEITLMS:
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Done at Kigali, on 21st May 2020.



Dr. Emile BIENVENU
Acting Deputy Vice Chancellor for Academic Affairs and Research



APPENDIX 1: PhD concept note format

1. Guidelines for a structured PhD research concept note *(To be strictly applied)*

- i. **Cover page with**
 - *Research Title (no more than 20 words)*
 - *The applicant's personal information*
 - *PhD by research programme (eg. Biology Education, Mathematics education, etc).*
 - *PhD research area(See guidelines in point 2 below)*
- ii. **Project summary:** Describe in general terms the problems you want to address. Provide an overall description of your anticipated PhD research concept, what you want to achieve and which kind of innovations it will bring *(Maximum 500 words)*
- iii. **Project problem and outputs:** Description and background of the research problem(s) you intend to address and descriptions of the individual outputs you expect to realize(500 words)
- iv. **Literature review:** Based on the reviewed literature, describe the existing knowledge and experience that you will build on from your own research or that of others, and how your PhD project will contribute to new scientific knowledge
- v. **Methodology:** Provide a brief description and justification of the methodology and research approach that will be used in your PhD research. *(500 words maximum)*
- vi. **Policy implications of the research (if any):** Please provide an indication of how relevant are the research outputs to policy change for development? *(200 words maximum)*
- vii. **Expected users of the research:** indicate and justify who will use your research results – during your project, and at the end? (organizations, educators, researchers, policy makers, community groups, etc.) *(300 words)*

2. Research areas

Research topics should mainly focus on (but not necessarily limited to) the following:

- i. Issues in teaching and learning of STEM, science and mathematics
- ii. Teaching approaches, assessment methods and experimental problem-solving in science, mathematics and STEM education
- iii. Scientific and mathematical thinking in students at school and college level
- iv. ICT integration in teaching and learning of science and mathematics
- v. Visual and spatial modes in STEM learning
- vi. Socio-cultural and gender factors in learning STEM
- vii. Science-Technology-Society-Environment Education
- viii. Structure and dynamics of STEM knowledge
- ix. Space and environmental science education

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