

**COLLEGE OF SCIENCE AND TECHNOLOGY (CST)**

**Call for PhD Studies at the African Center of Excellence in Energy for Sustainable Development (ACEESD)**

**1. Background**

The African Center of Excellence in Energy for Sustainable Development (ACEESD) is an approved ACE II project center of excellence envisioned to address key economic challenges resulting from low rural energy access, poor adoption of energy technologies in rural areas, and poor inter-state energy trading in the Eastern and Southern Africa region.

The ACE II project is a partnership between the World Bank and the Rwandan Government to strengthen selected institutions of higher education in the country to deliver quality post-graduate education and build collaborative research capacity in the Eastern and Southern Africa sub-region, and Africa as a whole.

The Centre therefore invites interested and highly motivated research-oriented students to submit applications for PhD positions in the field of renewable energy with a focus on the following areas:

**ACE-ESD PhD Programs**

PROGRAM	LEVEL	FOCUS AREAS
RENEWABLE ENERGY	PhD	<p>Smart &amp; Micro-grid Technologies (Wind, Solar, Mini-Hydro, Biomass, Geothermal); Battery management systems (BMS): This involves the renewable energy control, embedded system and power electronics skills; Energy storage system (ESS): This involves the renewable energy control, embedded system and power electronics skills; Renewable energy (bioenergy including bio-fuels, solar energy, wind energy, etc.):</p> <ul style="list-style-type: none"> <li>• Energy impact on the environment;</li> <li>• Energy for socio-economic development;</li> <li>• Energy system planning and modelling;</li> <li>• Energy infrastructure optimization;</li> <li>• Energy efficiency and demand side management;</li> <li>• Alternative energy</li> </ul>
ELECTRICAL POWER SYSTEMS	PhD	<p>Power system dynamics, Power Electronics for renewable energy, generation, transmission and distribution systems, Control systems (stochastic systems, stability analysis, system identification), industrial controls, and optimization Smart &amp; micro-grid system, Grid connected inverter optimization, Off grid connected inverter design, testing and control, Grid connected multilevel inverter design, etc..</p>

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### **ENERGY ECONOMICS**

PhD

Economic Evaluation of Renewable Energy Technologies, Inter-State Energy Trade Policy, Utilities Management, Energy environment, Energy benchmarking, Energy pricing, etc..

Supervision will be provided by a joint team of UR-CST and partner university academic staff from USA, Norway, Sweden, Turkey, Eastern and Southern Africa, etc. The PhD tenure will be hosted at the College of Science and Technology of the University of Rwanda, Kigali, Rwanda.

### **2. Admission Requirements**

Applicants must have a Master of Science (or equivalent) degree in field related to energy, electrical engineering, mechanical, electrical and electronics engineering, physics and material sciences, energy economics, economics and policy, energy economics and finance or economics and regulations. The applicant must demonstrate the ability to think and work independently and in a team environment.

### **3. Mode of Attendance**

Part time, full-time, distance learning, work-based learning, by research and dissertation/thesis.

### **4. Duration of Study**

The maximum duration for the PhD course will be four years.

### **5. Tuition Fees (Full time and Part time)**

- a. Administrative fees (non-refundable) including admission fees, registration, medical insurance, life insurance and student union contribution total amount is 95 000 FRW per year for National and East African Community (EAC) students and 114 000 FRW for others.
- b. Total tuition fees is 4 200 000 FRW for the whole study period (700 000 FRW per semester) for National and EAC students, while total fees for non-EAC students is 5 040 000 FRW (840 000 FRW per semester).

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### **6. Scholarship Modalities and Sponsorship**

Scholarship opportunities are available on a competitive basis for eligible candidates from Eastern and Southern Africa Region (Rwanda, Kenya, Malawi, Tanzania, Ethiopia, Burundi, Mozambique, Uganda, and Zambia) include others African Countries.

- Full scholarship: living expenses, tuition fees, and return air ticket
- Partial scholarship: tuition fees and return air ticket

All registered students (with or without scholarship) will be granted financial support. The support should cover research expenses that includes field trips, internships, conference attendance, and publication charges.

Financial assistance shall be provided to selected candidates for up to four years. The support will initially be granted for one year renewable upon a successful completion of the first year.

Female candidates and applicants with disabilities are encouraged to apply.

### **7. Required Documentation for Application**

- A cover letter indicating for which program of study the application is being made and description of the motivation to join the program
- A detailed curriculum vitae (CV)
- Notarized Master's and Bachelor's degrees and transcripts
- Recommendation letters from at least two academic referees who are knowledgeable about the applicant.
- Support letter from employer (if any).
- Copies of valid identification card and/or passport.
- Sponsorship letter from an organization (if any).
- Applicants from countries where English is not the medium of instruction must provide an English proficiency certificate from a relevant body or institution in their respective countries.
- Summary Research Proposal (Concept Note) relevant to the PhD degree sought. The concept note should state the research problem, the purpose and objectives of the research, the methodology, the expected outcome and its expected impact in the area of study.
- Master's Thesis abstract

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### **8. Where & How to Apply**

Interested applicants should forward their application together with all relevant documents to the email addresses provided below not later than **31<sup>st</sup> July 2017**. The required documents should be submitted in scanned soft copies in PDF format (preferably as one document). Proposals however can be submitted in Word or PDF format to the following email addresses: [acesd@ur.ac.rw](mailto:acesd@ur.ac.rw) and [etienne.ntagwirumugara@gmail.com](mailto:etienne.ntagwirumugara@gmail.com)

### **Important dates**

1. Opening of application process: 29<sup>th</sup> May 2017
2. Closing of application process: 31<sup>st</sup> July 2017
3. Admission process: 7<sup>th</sup> -20<sup>th</sup> August 2017
4. Registration: 21 August-8<sup>th</sup> September 2017

Kindly note that applications received after the deadline will not be considered.

### **9. Selection & Notification Process**

Successful applicants will be notified by email within **two weeks** of the closing of applications. If you do not receive any feedback after this period, you were unfortunately unsuccessful.

### **10. Commencement of Studies**

Successful Applicants will be required to report in person at the College of Science & Technology (Nyarugenge Campus) for commencement of studies on 18<sup>th</sup> September, 2017. Further details will be communicated to selected candidates in due process.

### **11. Contact for Further Information**

In case of further enquiries or clarifications, contact the following:

Prof. Etienne Ntagwirumugara

The Centre Director, ACEESD

Email: [acesd@ur.ac.rw](mailto:acesd@ur.ac.rw), [entagwir@yahoo.fr](mailto:entagwir@yahoo.fr) or [etienne.ntagwirumugara@gmail.com](mailto:etienne.ntagwirumugara@gmail.com)

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