African Centre of Excellence

East and Southern Africa

**[in Energy for Sustainable Development] ACEESD**

**[ACE II 017]**

**Implementation Plan**

**2016– 2020**

**(Revised September 2016)**

# LIST OF CONTENT

[LIST OF CONTENT 2](#_Toc445222735)

[LIST OF ABBREVIATIONS 3](#_Toc445222736)

[1. BRIEF NARRATIVE SUMMARY (max 2 pages) 4](#_Toc445222737)

[2. OVERVIEW OF PLANNED OUTPUTS, ACTIVITIES AND COST FOR FIRST YEAR 7](#_Toc445222738)

[3. TIMING OF PLANNED ACTIVITIES FOR ENTIRE PROJECT PERIOD *(Gantt chart)* 13](#_Toc445222739)

[4. IMPLEMENATION ARRANGEMENTS 16](#_Toc445222740)

[4.1 Guiding rules and regulations 16](#_Toc445222741)

[4.2 Governance structures 17](#_Toc445222742)

[4.3 Project team Roles and responsibilities 18](#_Toc445222743)

[4.4 Incentive structures 20](#_Toc445222744)

[4.5 Environment safeguards 23](#_Toc445222745)

[5. PERFORMANCE MONITORING 24](#_Toc445222746)

[6. DETAILED BUDGET 27](#_Toc445222747)

[7. DETAILED ACTIVITY SHEETS (one for each activity in year 1) 28](#_Toc445222748)

[Action Plan 1: Set-up institutional framework for commencement of the ACEESD 28](#_Toc445222749)

[Action Plan 2: Learning Excellence 33](#_Toc445222750)

[Action Plan 3: Research excellence 40](#_Toc445222751)

[Action Plan 4: Sustainable Financing 45](#_Toc445222752)

[Action Plan 5: Attracting Academic Staff and Students from the Region 48](#_Toc445222753)

[Action Plan 6: Collaboration with National, Regional and International Partners 51](#_Toc445222754)

[Action Plan 7: Governance and Financial Management 55](#_Toc445222755)

# LIST OF ABBREVIATIONS

AAIT Addis Ababa Institute of Technology

ACEESD African Centre of Excellence in Energy for Sustainable Development

CBE College of Business and Economics, University of Rwanda

CJC Creating Job Creators Programme

CMU-R Carnegie Mellon University, Rwanda

CST-UR College of Science and Technology, University of Rwanda

CSU Colorado State University, USA

DLI Disbursement Link Indicators

DLR Disbursement Link Results

NM-AIST Nelson Mandela African Institution of Science and Technology

NSC National Steering Committee of ACEESD

PURC Public Utilities Research Centre, University of Florida, USA

REG Rwanda Energy Group

RPGS Office of Research and Postgraduate Studies

RURA Rwanda Utilities Regulatory Authority

SERC Strathmore Energy Research Centre

SDR Special Drawing Rights

SPIU Special Projects Implementation Unit, University of Rwanda

UR University of Rwanda

# BRIEF NARRATIVE SUMMARY (max 2 pages)

Focus on motivation, objectives, methodology, results and partnerships. Must include a section on important changes made. *(Please remember to use the reviewers’ feedback as requested/applicable)*

**Background:**

­Modern energy access acts as a catalyst for development. It connects economic growth with social equity and environmental sustainability which are important Millennium Development Goals. However, the vast majority of sub-Saharan Africans lack access to affordable clean energy and critical energy services.[[1]](#footnote-1).

The sub-region also lacks the critical mass of highly skilled professionals, with specialized knowledge in engineering and technology (especially in power systems and in electrical engineering) that is required to generate the innovations needed to boost productivity in the energy sector. This presents a significant challenge which requires sustained efforts to train highly skilled energy professionals, policy makers and practitioners, who will apply research towards the development of renewable energy technologies and solutions for the critical/priority sectors of the economy in the sub-region.

**Training**

The Africa Centre of Excellence in Energy for Sustainable Development (ACEESD) in the College of Science and Technology, University of Rwanda is being established to address this critical challenge. To overcome these challenges, the Centre will commit to interdisciplinary research and training in smart micro-grid energy systems, tailored to serve remote and/or rural areas using renewable sources and inter-state energy trading, management and policy. The training programs will focus on a strong scientific foundation, rigorous evaluation of experimental results and on critical thinking about scientific data. The new programs will be supported by an e-learning platform that provides consolidated learning resources and interaction with the student community and faculty, as well as an energy high performance computing laboratory which will be established in collaboration with the partners.

**Applied Research**

The training programs at ACEESD will be anchored by the strong, well-structured, cutting edge research and innovation to guide development of new approaches that will be a regional hub for research and training of African engineers, policy makers and energy utility managers (in micro-grid energy systems using renewable energy sources and interstate energy trading, management and policy); contribute to rural development through technology transfer; and nurture and promote entrepreneurship development in the energy sector towards sustainable development. Opportunities for regionally collaborative and work done in partnership with private sector companies will be developed and incorporated into the centre as experiences for students. ACEESD can achieve this through leveraging on its strong partnership with peer academic institutions, industry and regulatory bodies and private sectors actors in Rwanda, Uganda, Kenya, and Tanzania and in collaboration with its external partners; the Colorado State University in USA – with whom the CST has a very strong active partnership, University of Agder from Norway with whom the CST has a very strong and active partnership and then Tubitak Research Centre, Turkey.

**Research Core facility**

To create an enabling environment for training and research, ACEESD will also develop a Core research facility with state of the art equipment that will provide students with a hands-on experience on the use of modern research methods. The facility will also serve as a hub for collaboration among scientists in the sub-region with access to modern research equipment for analysis of samples and other services at reasonable cost. Our goal is to maximize economy-wide investment in energy efficiency and eventual transition to renewable and low-carbon energy. In addition, the ACEESD core will build capacity and expertise for servicing and repair of equipment. As part of procurement, equipment maintenance and more importantly training will be included to bring expertise in maintaining and repairing the equipment at the centre. The ACEESD core facility will also include an energy high performance computing unit to provide access to cluster computing services, and scientific software for data analyses, modelling/simulation, and information dissemination.

**Partners**

Regional partners including; the Strathmore University, Nairobi, Kenya through its Strathmore Energy Research Centre (SERC) will be involved in carrying out high quality research and technical training as well as consultancy services in the energy sector. They will also be involved in recruiting students for our programs for new short-term, masters and Ph.D courses. Makerere University, Uganda and Nelson Mandela – African Institute of Science and Technology, Dar es salaam, Tanzania will be involved in most of our programs both Masters and PhD.

National partners including REG, RURA, Ngali Energy Ltd and Mobisol will be engaged in curriculum development of new short-term courses including Solar Grid Maintenance, Energy Trades etc., capacity development in applied research in Micro Grid Energy systems, host students for research experiences and learning on the production and company operations processes. Private sector partners will be involved in student internships and manufacturing of components to be used in the Micro Grids Systems.

Major international partners including; Colorado State University and Carnegie Mellon University will be involved in Micro Grids research and development; University of Agder in Norway already has an existing partnership with overlap in faculty and shared learning experiences with CST; they will assist in curriculum development and will host faculty and students for training and research especially in Renewable energy and e-leaning; and the Public Utility Research Centre (PURC), University of Florida, USA who will steer in energy trade and policy.

Workshops will be delivered at both the centre and partner institutions as well as students coming to the Centre from partner institutions for short research visit or Masters and PhD program.

Colorado State University from USA and Tubitak Research Centre will be involved beyond the classrooms to create long-standing relationships with industry to transfer technology developed in research labs and to commercialize projects that can make a difference in the world. Explorations in smart-grid technology and innovations in alternative energy development serve as the basis for local and global partnerships, improving quality of life locally and globally through energy solutions.

**Important Changes Made**

The important changes made to establish the new ACEESD centre are the formalization and expansion of existing partnerships allowing for the expansion in capacity. In particular, the increased participation of scientists from the region will significantly increase our faculty strength. Current student levels will be expanded from 0 PhDs in 2014 to a goal of 20 by 2016, from 5 Masters Students to a goal of 40 per year as well as an overall expansion of short course participants to an average of 30 per year. The administrative structure at the University of Rwanda supports the development of this centre under the leadership of the centre director who will report to the Dean of Engineering and Principal of College of Science and Technology. This centre has the full support of the Vice Chancellor and Deputy-Vice Chancellor. The existing procurement structure at the university allows for competitive bidding compliant with the World Bank procurement policies. The centre will be assigned its own procurement officer acceptable to the centre as well as financial accountant manager. In addition for the Centre’s own internal verification/audit, the centre staff will include its own accountant.

**Projected Output**

At the end of the four year period of the World Bank grant, ACEESD will have achieved the following: (i) international accreditation for at least one new specialized graduate program, (ii) enrolled 40 PhDs, 120 Master students, of which 30% would be regional and 30% female, (iii) trained 80 practitioners and policy-makers through short term courses, of which 30% would be regional and 30% female, (iv) published 30 peer-reviewed research publications, of which at least 60% include regional and international co-authors, (v) attract an average of $0.5M per year in externally mobilized funds, (vi) improved research and teaching environment through a lecture rooms and students workstations to provide new lecturer and seminar rooms, well-equipped micro-grid research laboratory, established an energy high performance computing unit and e-learning platform.

# OVERVIEW OF PLANNED OUTPUTS, ACTIVITIESAND COST FOR FIRST YEAR

Table 1: Overview of first project year *(this table is closely linked to section 7, as each activity row here in table 1 will require a separate activity sheet in section 7)*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Code** | **Priority Rank** | **Result/**Activity**/***Task* | **Budget Estimate (US$)** | | |
| **ACE leader** | **Partners** | **Total** |
| **Action Plan1** | ***(1 highest*** | ***Set-up institutional framework for commencement of the ACE*** | ***(Component total for ACE leader)*** | ***(Component total for partners)*** | ***(Total of component)*** |
| ***5 lowest)*** |
| 1.1 | 1 | Put in place governance framework, financial management, administrative procurement, monitoring and evaluation procedures and systems | *2,500* | *6795* | *9,295* |
| 1.2 | 1 | Schedule and hold ACE implementation team meetings | *6,000* | *0* | *6,000* |
| 1.3 | 2 | Build administrative support team for ACEESD | *48,780* | *0* | *48,780* |
| 1.4 | 3 | Provide institutional capacity training in governance, leadership, data systems and M&E for ACEESD Staff | *3,000* | *0* | *3,000* |
|  |  | **Sub‐Total** | *60,280*  90% | *6,795*  10% | *67,075*  100% |
| **Action Plan2** | ***(1 highest*** | ***Learning Excellence*** | ***(Component total for ACE leader)*** | ***(Component total for partners)*** | ***(Total of component)*** |
| ***5 lowest)*** |
| 2.1 | 1 | Develop new Masters and PhD degree programmes | *3000* | *10220* | *13,220* |
| 2.2 | 1 | Approval of new Masters and PhD programmes | *1500* | *0* | *1,500* |
| 2.3 | 2 | Obtain accreditation for Masters and PhD programmes | *3000* | *0* | *3,000* |
| 2.4 | 3 | Develop professional short courses and trainings | *0* | *0* | *0* |
| 2.5 | 2 | Enroll students into Masters programmes | *0* | *54000* | *54,000* |
| 2.6 | 2 | Enroll students into PhD programmes | *57101* | *60800* | *117,901* |
|  |  | **Sub‐Total** | *64,601*  34% | *125,020*  66% | *189,621*  100% |
| **Action Plan3** | ***(1 highest*** | ***Research excellence*** | ***(Component total for ACE leader)*** | ***(Component total for partners)*** | ***(Total of component)*** |
| ***5 lowest)*** |
| 3.1 | 2 | Set-up a micro-grid research laboratory | *760,000* | *0* | *760,000* |
| 3.2 | 1 | Remodel students’ workstations into lecturing facility and set up a eLearning platform | *220,000* | *0* | *220,000* |
| 3.3 | 3 | Joint research projects with regional and internal institutions | *0* | *0* | *0* |
| 3.4 | 3 | Recruit One Full-time Faculty; one Associate Research Officer and two Research Lab Engineers | *0* | *0* | *0* |
|  |  | **Sub‐Total** | *980,000*  100% | *0* | *980,000*  *100%* |
| **Action Plan4** | ***(1 highest*** | ***Sustainable Financing*** | ***(Component total for ACE leader)*** | ***(Component total for partners)*** | ***(Total of component)*** |
| ***5 lowest)*** |
| 4.1 | 2 | Organise industrial short courses and trainings for industry partners | *0* | *0* | *0* |
| 4.2 | 1 | Provide support to ACEESD academic staff to prepare and apply for research grants | *1,500* | *0* | *1,500* |
| 4.3 | 1 | Support Masters and PhD students to apply for research, students and travel grants to support their research and conference attendances and other meetings. | *1,000* | *0* | *1,000* |
|  |  | **Sub‐Total** | *2,500*  100% | *0* | *2,500*  100% |
| **Action Plan5** | ***(1 highest*** | ***Attracting Academic Staff and Students from the Region*** | ***(Component total for ACE leader)*** | ***(Component total for partners)*** | ***(Total of component)*** |
| ***5 lowest)*** |
| 5.1 | 2 | Host educational and outreach programs in the region targeting female students | *33,060* | *40,000* | *73,060* |
| 5.2 | 1 | Organize advertisement and marketing for ACEESD programs and maintain an active web-presence – development of ACEESD Website. | *13,041* | *0* | *13,041* |
|  |  | **Sub‐Total** | *46,101*  54% | *40,000*  46% | *86,101*  100% |
| **Action Plan6** | ***(1 highest*** | ***Collaboration with National, Regional and International Partners*** | ***(Component total for ACE leader)*** | ***(Component total for partners)*** | ***(Total of component)*** |
| ***5 lowest)*** |
| **6.1** | 1 | Sign MoUs with Partners | *19,780* | *0* | *19,780* |
| **6.2** | 2 | Joint supervision of students with faculty from regional and international partners. | *0* | *0* | *0* |
| **6.3** | 2 | Institute Staff and Students exchange programs between ACEESD and partners | *144,795* | *0* | *144,795* |
| **6.4** | 3 | Support regional students and staff with travel grants for short term research visits. | *0* | *0* | *0* |
|  |  | **Sub‐Total** | *164,575*  34% | *0* | *164,575*  *100%* |
| **Action Plan7** | ***(1 highest*** | ***Governance and Financial Management*** | ***(Component total for ACE leader)*** | ***(Component total for partners)*** | ***(Total of component)*** |
| ***5 lowest)*** |
| 7.1 | 1 | Setup International Scientific Advisory Board. | *1,000* | *13,595* | *14,595* |
| 7.2 | 1 | Ensure transparency in financial management by providing web access to budgets, annual work plan, audit reports, financial reports etc. | *200* | *0* | *200* |
| 7.3 | 2 | Purchase office equipment, stationery and supplies for administrative team of the center | *39,000* | *0* | *39,000* |
| 7.4 | 2 | Collect, Collate and Analyse Data for Monitoring and Evaluation (including student surveys & staff evaluations) | *1,000* | *0* | *1,000* |
|  |  | **Sub‐Total** | *41,200*  75% | *13,595*  25% | *54,795*  100% |
| **TOTAL BUDGET** | | | ***1,359,257***  **(88%)** | ***185,410***  **(12%)** | ***1,544,667***  **(100%)** |

\*\*\*Please be realistic with what you can manage to initiate and implement in project year 1 *(10 – 15 % of total budget is realistic for year 1)*

Table 2: Overview distribution among partners ***(this table is a breakdown of the partner budget column from table 1, so the last column here in table 2 must match the second last column in table 1)***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Code** | **Result/**Activity**/***Task* | **Budget Estimate (US$)** | | | | | | | | | | | | |
| ***CSU*** | ***Univ. of Agder*** | ***Tubitak Research Centre*** | **PURC** | ***Makerere University*** | ***NM-AIST*** | ***AAIT*** | ***SERC*** | **CMU-R** | **CBE** | **REG** | **RURA** | **Total Partner Budget** |
|
| **Action Plan1** | ***Set-up institutional framework for commencement of the ACE*** | ***(Component total for partner)*** | | | | | | | | | | | | ***(Partners total of component)*** |
| 1.1 | Put in place governance framework, financial management, administrative procurement, monitoring and evaluation procedures and systems |  |  |  |  | *2,265* | *2,265* | *2,265* |  |  |  |  |  | *6,795* |
| 1.2 | Schedule and hold ACEESD implementation team meetings |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.3 | Build administrative support team for ACEESD |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.4 | Provide institutional capacity training in governance, leadership, data systems and M&E for ACEESD Staff |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Sub-total** |  |  |  |  | *2,265* | *2,265* | *2,265* |  |  |  |  |  | *6,795* |
| **Action Plan 2** | ***Learning Excellence*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
|
| 2.1 | Develop new Masters and PhD degree programmes | *3,100* | *3,100* |  |  |  | *2,010* | *2,010* |  |  |  |  |  | *10,220* |
| 2.2 | Approval of new Masters and PhD programmes |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.3 | Obtain accreditation for Masters and PhD programmes |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.4 | Develop professional short courses |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.5 | Enrol students into Masters programmes |  |  |  |  | *18,000* | *18,000* | *18,000* |  |  |  |  |  | *54,000* |
| 2.6 | Enrol students into PhD programmes |  |  |  |  | *15,200* | *15,200* | *15,200* | *15,200* |  |  |  |  | *60,800* |
|  | **Sub-total** | *3,100* | *3,100* |  |  | *33,200* | *35,210* | *35,210* | *15,200* |  |  |  |  | *125,020* |
| **Action Plan 3** | ***Research excellence*** | ***CSU*** | ***Univ. of Agder*** | ***Tubitak Research Centre*** | **PURC** | ***Makerere University*** | ***NM-AIST*** | ***AAIT*** | ***SERC*** | **CMU-R** | **CBE** | **REG** | **RURA** | ***Total Partner budget*** |
|
| 3.1 | Set-up a micro-grid research laboratory |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.2 | Remodel students’ lecturing facilities and set up an e-Learning platform |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.3 | Joint research projects with regional and internal institutions |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.4 | Recruit One Full-time Faculty; one Associate Research Officer and two Research Lab Engineers |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Sub-total** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Action Plan 4** | ***Sustainable Financing*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
|
| 4.1 | Organize industrial short courses and trainings for industry partners |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.2 | Provide support to ACEESD academic staff to prepare and apply for research grants |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.3 | Support Masters and PhD students to apply for research, students and travel grants to support their research and conference attendances & other meetings. |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Sub‐Total** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Action Plan 5** | ***Attracting Academic Staff and Students from the Region*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
|
| 5.1 | Host educational and outreach programs and seminars in the region (with a target on female students**)** |  |  |  |  | *10,000* | *10,000* | *10,000* | *10,000* |  |  |  |  | *40,000* |
| 5.2 | Organize advertisement and marketing for ACEESD programs and maintain an active web-presence – development of ACEESD Website. |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Sub‐Total** |  |  |  |  | *10,000* | *10,000* | *10,000* | *10,000* |  |  |  |  | *40,000* |
| **Action Plan 6** | ***Collaboration with National, Regional and International Partners*** | ***CSU*** | ***Univ. of Agder*** | ***Tubitak Research Centre*** | **PURC** | ***Makerere University*** | ***NM-AIST*** | ***AAIT*** | ***SERC*** | **CMU-R** | **CBE** | **REG** | **RURA** | ***Total Partner Budget*** |
|
| 6.1 | Sign MoUs with Partners |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.2 | Joint supervision of students with faculty from regional and international partners. |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.3 | Institute Staff and Students exchange programs between ACEESD and regional partners |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.4 | Support students and staff with travel grants for short term training and research visits. |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Sub‐Total** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Action Plan 7** | ***Governance and Financial Management*** |  |  |  |  |  |  |  |  |  |  |  |  |  |
|
| 7.1 | Setup International Scientific Advisory Board. | *3,400* | *3,400* |  |  | *2,265* | *2,265* | *2,265* |  |  |  |  |  | *13,595* |
| 7.2 | Ensure transparency in financial management by providing web access to budgets, annual work plan, audit reports, financial reports etc. |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.3 | Purchase office equipment, stationery and supplies for administrative team of the center |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.4 | Collect, Collate and Analyse Data for Monitoring and Evaluation (including student surveys & staff evaluations) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Sub‐Total** | ***3,400*** | ***3,400*** |  |  | ***2,265*** | ***2,265*** | ***2,265*** |  |  |  |  |  | ***13,595*** |
|  | **Grant Total** | ***6,500*** | ***6,500*** |  |  | ***47,730*** | ***49,740*** | ***49,740*** | ***25,200*** |  |  |  |  | ***185,410*** |

\*Add rows and adjust columns as applicable.

# TIMING OF PLANNED ACTIVITIES FOR ENTIRE PROJECT PERIOD *(*[*Gantt chart)*](http://en.wikipedia.org/wiki/Gantt_chart)

Table 3: Work plan for the project*(Please use project year 1, 2, 3 and month 1, 2, 3 and not specific dates like 2016 September, as we cannot predict the exact start date for the project. Please indicate as a footnote when in the challenger year MSc students start, and PhD students if they have fixed starting dates).*

| **Code** | **Result/**Activity**/***Task* | **Budget Estimate (US$)** | | | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year 1** | | | | **Year 2** | | | | **Year 3** | | | | **Year 4** | | | | **Year 5** | | | |
| **Action Plan1** | ***Set-up institutional framework for commencement of the ACE*** | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | |
| ***Q.1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.1*** | ***Q.2*** | ***Q.3*** | ***Q.***  ***4*** | ***Q.1*** | ***Q. 2*** | ***Q. 3*** | ***Q. 4*** |
| 1.1 | Put in place governance framework, financial management, administrative procurement, monitoring and evaluation procedures and systems |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.2 | Schedule and hold ACE implementation team meetings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.3 | Build administrative support team for ACEESD |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.4 | Provide institutional capacity training in governance, leadership, data systems and M&E for ACEESD Staff |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Action Plan 2** | ***Learning Excellence*** | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | |  |  |  |  |
| ***Q.1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.1*** | ***Q.2*** | ***Q.3*** | ***Q.***  ***4*** |  |  |  |  |
| 2.1 | Develop new Masters and PhD degree programmes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.2 | Approval of new Masters and PhD programmes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.3 | Obtain accreditation for Masters and PhD programmes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.4 | Develop professional short courses |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.5 | Enrol students into Masters programmes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.6 | Enrol students into PhD programmes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Action Plan 3** | ***Research excellence*** | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | |  |  |  |  |
| ***Q.1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.1*** | ***Q.2*** | ***Q.3*** | ***Q.***  ***4*** |  |  |  |  |
| 3.1 | Set-up a micro-grid research laboratory |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.2 | Remodel students’ lecturing facilities and set up an e-Learning platform |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.3 | Joint research projects with regional and internal institutions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.4 | Recruit Associate Research Officer and research lab technician |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Action Plan 4** | ***Sustainable Financing*** | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | |
| ***Q.1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.1*** | ***Q.2*** | ***Q.3*** | ***Q.***  ***4*** | ***Q.1*** | ***Q.2*** | ***Q.3*** | ***Q.***  ***4*** |
| 4.1 | Organize industrial short courses and trainings for industry partners |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.2 | Provide support to ACEESD academic staff to prepare and apply for research grants |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.3 | Support Masters and PhD students to apply for research, students and travel grants to support their research and conference attendances and other meetings. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Action Plan 5** | ***Attracting Academic Staff and Students from the Region*** | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | |
| ***Q.1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.1*** | ***Q.2*** | ***Q.3*** | ***Q.***  ***4*** | ***Q.1*** | ***Q.2*** | ***Q.3*** | ***Q.***  ***4*** |
| 5.1 | Host educational and outreach programs and seminars in the region (with a target on female students**)** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.2 | Organize advertisement and marketing for ACEESD programs and maintain an active web-presence – development of ACEESD Website. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Action Plan 6** | ***Collaboration with National, Regional and International Partners*** | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | |
| ***Q.1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.1*** | ***Q.2*** | ***Q.3*** | ***Q.***  ***4*** | ***Q.1*** | ***Q.2*** | ***Q.3*** | ***Q.***  ***4*** |
| 6.1 | Sign MoUs with Partners |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.2 | Joint supervision of students with faculty from regional and international partners. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.3 | Institute Staff and Students exchange programs between ACEESD and regional partners |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.4 | Support students and staff with travel grants for short term training and research visits. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Action Plan 7** | ***Governance and Financial Management*** | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | | *1st Half* | | *2nd Half* | |
| ***Q.1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.***  ***1*** | ***Q.2*** | ***Q.***  ***3*** | ***Q.4*** | ***Q.1*** | ***Q.2*** | ***Q.3*** | ***Q.***  ***4*** | ***Q.1*** | ***Q.2*** | ***Q.3*** | ***Q.***  ***4*** |
| 7.1 | Setup International Scientific Advisory Board. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.2 | Ensure transparency in financial management by providing web access to budgets, annual work plan, audit reports, financial reports etc. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.3 | Purchase office equipment, stationery and supplies for administrative team of the centre |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.4 | Collect, Collate and Analyse Data for Monitoring and Evaluation (including student surveys & staff evaluations) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# IMPLEMENTATION ARRANGEMENTS

## Guiding rules and regulations

*(Briefly describe the rules that govern the ACE and its partnerships, including safeguarding against fraud/corruption, just referring to rules and regulation is not sufficient).*

The goal of ACEESD is to promote regional specialization in the areas of Micro-Grid Energy systems and Energy Management (trade and policy), for sustainable development in the East and Southern African region. The Centre aims to offer solutions to the energy needs of the sub-region through relevant quality training and applied research at the postgraduate level. Here we provide a framework for undertaking the improvement of education, research and scholarship for off-grid energy generation using Micro-Grid systems in the region. This is well aligned with the University of Rwanda (UR) strategic plan to support research and training that encourages knowledge mobilization for sustainable development and subsequent improved quality of life. To this end, the University management will play an active role in signing financing agreements, MoUs, contracts, and control of ACEESSD funds through its financial management team including Finance, Audit, Advancement and Procurement Units that will provide accounting and financial oversight and periodic reporting for the Centre.

The Institution’s policies concerning admission and enrolment for MSc and PhD through the School of Postgraduate Studies will strictly be adhered to by the ACEESD. The Directorate of Research and Postgraduate Studies at the CST-UR will liaise with the Centre to enforce these rules in the student admission processes. The University also has a gender equality policy in place that is geared to empower women in scholarship, administration and appointment into academia. Therefore, gender mainstreaming will be adhered to in the process of admissions and the encouragement of female students /faculty in human resource development in the field of Micro-grid energy generation systems and the associated applied research. The University’s regulation on disciplinary policy will also be strictly adhered to ensure harmonious running of the Centre. Furthermore, the Centre will comply with CST-UR’s intellectual property regulations.

In addition to this, the structures for financial accountability (finance, audit, procurement, price control, pre-qualifications) as laid down by the university will be strictly adhered to and will be enforced in complementation to the World Bank financial regulations. To engender these, a Finance officer, Procurement officer and M&E Officer will be assigned and attached to the Single Project Implementation Unit (SPIU) of the University of Rwanda. They are to report to the university management through the Centre Leader all matters of appropriation and implementation. A committee constituted from the finance and procurement units will check all the books of accounts of the ACEESD, grant approval for all procurements, and monitor the accounts and financial dealings of the Centre.

The Office of Research and Postgraduate Studies (RPGS) of CST-UR has in place an institutional research policy. Research that will be conducted by students and faculty of the ACEESD will be made known to the RPGS to ensure its adherence to the guiding policies on research. The RPGS has a competent Director in charge of pre-award, post-award; deputy director in charge of policy implementation, and a Director and a Research Administrator who are all trained in Research Administration and Management. They will assist the Centre in translating research results beyond publications to community relevance.

The University’s Central Research Ethics Committee will receive research applications to be conducted by the Centre, and ascertain that it does comply with the university approval process as well as the National Research Ethics guidelines, which have been adapted for Higher Learning Institution use.

To allow the Centre independence, autonomy and flexibility in its timing and decision-making, the Principal of the CST-UR has appointed a project management team to run the Centre. This team will include the Centre Leader and the Deputy Centre Leader. This is to make the Centre an entity that is compliant with university institutions but not lost in the day-to-day operations of the University. As an integral part of a university system, the Centre administrative structure envisions a strategic approach to evolve innovative thinking in bringing about excellence in human capacity development in off Grid Micro-Grid energy generation system for sustainable rural development of Africa, thus contributing to the world energy system.

A critical component of the Centre’s activities will be on-site and remote teaching and research. This comes with the risk of having too much distance in teaching and learning as well as likely imbalances in content of courses taught. The ACEESD in addressing these will assemble a team of leading academics in energy studies (both from the technical-engineering and policy-related areas) will be assembled from our partner institutions (CMU-R, Colorado, Agder, Tubitak, NM-AIST, AAIT, Makerere) to run the online and distance learning courses. A comprehensive list of these will be prepared together with the development of the MSc and PhD programmes. Most of these modules will be taught from the Centre and our key national partner CMU-R. To ensure the quality of our distance learning programmes, the Centre will regularly monitor these through student and faculty surveys, module reviews among others with regards to the modules and where they are taught from

## Governance structures

*(Briefly describe ACE governance structures both within the host university and among the partner institutions, at faculty/centre level and university/institution level. Which partner is a part of the Board/Steering Committee, how do they participate in meeting, who covers the cost, etc.)*

The ACEESD will have Prof. Etienne Ntagwirumugara (Centre Leader) and Prof. Bruce Krogh (Deputy Centre Leader and Principal Investigator) to be in charge of the Centre. The Centre Leader will report to the Principal of the College of Science and Technology (Prof. Manasse Mbonye). The Centre leaders will be assisted by members of the ACEESD Steering Committee and the International Scientific Advisory Board.

In the initial quarter of the project implementation, all these teams/groups will be brought together to develop the work plan and schedule of activities for the first year. All staff (administrative and faculty) will undergo training in World Bank procedures, in the management of large donor-funded projects, as well as in CST’s administrative, financial and procurement procedures. In the first year, all administrative processes and procedures for the management of ACEESD’s units and the Secretariat will be established. These processes and procedures which will be developed into Comprehensive Procedures Handbooks will cover procurement, monitoring and evaluation, accounting, and program implementation and reporting.

The day-to-day running of the Centre will be managed by the ACEESD Secretariat. The Secretariat will oversee activities such as program administration, coordination of performance contracts and Memorandum of Understandings (MoUs) with all partners, and the development of work schedules with and for all units. An Industrial/Communities outreach Unit will also be established within the Secretariat to engage in capacity development and liaise with industry, government sector agencies as well as community leaders and local authorities across the East Africa region. This is for purposes of field testing of developed technologies, as well as research work of PhD and Master’s students. The Secretariat will be headed by an Administrator with dedicated Accounts, Procurement, M&E Officer and Communication/ICT Officers who will be hired on a full-time basis.

CST management personnel with extensive experience in the management of large donor-funded projects will provide oversight monitoring services to the Secretariat. These include CST’s Director of Finance (Mr. HIGIRO C. Johnson); Procurement Officer (Mr. GAHUNGA Callixte) and the Director of Administration and HRM Unit, Mr. RURANGWA Fred.

***ACEESD Organizational Chart***



## Project team Roles and responsibilities

*(Brief Terms of Reference (TOR) for the most important ACE team member and project financed support staff\* (maximum 5 – 7 people)*

**Table 4: Overview of core project team:**

|  |  |  |  |
| --- | --- | --- | --- |
| **POSITION** | **Person/**  **Qualifications** | **Discipline** | **Responsibility** |
| Centre Leader | Prof. Etienne Ntagwirumugara | Electrical, Electronics and Telecom. | The Centre Leader will lead and manage all aspects of the  activities of the Centre |
| Deputy Centre Leader | Prof. Bruce Krogh | Electrical and Computer Engineering | The Deputy Centre Leader will assist the Centre Leader in  running the Centre   * Available to cover for the Centre Leader * Exploration of ideas and decision making * Assuming delegated responsibilities (examples: partnership meetings, review reports from internal procurement and financial officers) * Supervise the support personnel * Liaison for the accounting and procurement officers |
| Executive Advisor | Masters/PhD Degree Level |  | * Supervise the functioning and the administration of the organization to ensure the activities are executed in compliance with the Centre policies and goals * Advise the Centre on planning the activities and making relevant arrangements such as to ensure timely completion of projects * Synchronize activities of the project members and direct them towards achieving their individual and departmental goals * Study the market trends and make appropriate changes to the set plans and policies as per the prevailing trends |
| MSc/PhD Coordinators | Full Professor |  | Chair of Studies, Training and Research sub-committee, Operationalize  centre ideas:   * Lead curriculum design, * Lead student studies * Coordinating student recruitment, * Leading development of workshop content * Monitors student performance for progress * Oversee research infrastructure and equipment management. |
| Associate Researcher | Completed  PhD level  training (postdoctoral) |  | Will work with the Centre Leader and Head MSc/PhD Coordinators   * Support the students in completing their research projects * Assist students in manuscript writing and review * Assist students and the centre by writing research grant proposals * Overall execute the research agenda of the Centre as unifying force |
| Researcher Lab Engineers | Bachelors/  Master’s degree level in  Engineering |  | Assist MSc/PhD Coordinators and Associate Researcher in:   * Managing the laboratories (supplies, equipment, reagents) * Assisting the research fellows and students in their research. |
| Accounting | Bachelors  degree level inAccounting |  | Will assist the Center Leader and Administrator in accounting  duties of the Center |
| Procurement  Officer | Bachelors  degree level |  | Liaise with the CST’s Head of Procurement to:   * Placing advertisements for national competitive tender * Opening of tender * Evaluation of tender * Notification of awards, contracts awarded * Contracts management * Ensure goods and services meet the Center’s specifications and quality |

*\* If the project is not using existing university administrative and support staff, justification for this decision is required.*

## Incentive structures

*(Briefly describe the incentive structures for involved staff at lead and partner institutions (faculty, administration, management) as well as towards involvement of external stakeholders, e.g. private sector). Please be aware that the World Bank supported project does not support salary topping up, sitting allowances and the like.*

**Incentive for Staff at Lead / Host Institutions and Partner Institution**

**Participation in International Conferences and Seminars** – Key faculty members at the Lead/ host institutions who qualify to present a scientific paper shall be motivated through a competitive awarded with an opportunity to participate in international conferences relevant to the focal area of the centre. The Centre shall facilitate for their travel, accommodation admission fees and per diem as budgeted for in the action plan.

Staff from Partner Institution shall be facilitated to attend Seminars as planned to be held at the host institution through provision of travel and accommodation costs.

**Competitive Research Grants and Publication Support**– ACEESD shall establish a small competitive research grant scheme that shall be only eligible to faculty of host and partner institutions actively involved in the running of the Centre. The Centre shall make periodic call for proposals to address relevant knowledge gaps, and all submission shall be subjected to an external credible independent evaluation committee. Such research grants shall be subjected to conditions ensure it involve at least two countries in the East and South Africa region, a non-university sector partners, Students. The research will need to have to result / findings published in an approved peer reviewed article within e.g. 18 months or the funds must be reimbursed. This is expected to increases opportunity of staff at the Host and Partner Institutions for producing highly rated publications in reputable journals, increasing knowledge generation and access to subsequent grant support from elsewhere.

**Staff Support -** The Centre shall strive to hire qualified Research Lab Engineer) to support the project leader/PI and other Key academic staff to relieve them of spending a lot of time on administrative task. Where existing faculty are engaged in research and publication for a longer period, a replacement teaching staff shall be hired on a short period on contractual basis to free time for the former to fully focus on research and publication.

**Faculty Exchange –** facilitation in terms of travel cost for key faculty member and scientific partners in both the host and Partner institution, who are actively involved in the execution to participate in a scientific/teaching visit at the partner and host institutions respectively.

**Research Equipment –** facilitation to acquire some equipment to be used for research and teaching as deemed relevant to realize and deliver on their Disbursement Link Results (DLRs) shall be availed upon review of request on a need to need basis. Such equipment shall be subject only to items that trigger Disbursement Link Indicators (DLIs).

**Incentives for Students**

Students in the Centre have the opportunity to undertake industrial training through internships programme with the Centre partners in the Energy Sector. This will ensure that they are adequately exposed to practical and pragmatic approaches of Energy generation and distribution systems and the production of research findings.

Through its **Creating Job Creators** Programme (CJC), and exposure to the industry, students shall be equipped with entrepreneurial and managerial skills that will help them start business enterprise or enter the workforce more easily. ACEESD will liaise with its industry partners to actively seek and establish opportunities for its graduates to establish start-ups with the aim of transferring the skills and knowledge acquired from the Centre into workable everyday solutions to community. This culminates to the development of a future of human resources in the energy sector within the Region.

Exchange programs for the region will allow regional students to benefit from the resources in teaching by faculty and facilities of the Centre. Laboratories of international partners like the Colorado State University, Carnegie Mellon University, etc. are open to the Centre for targeted learning by faculty for Centre capacity building. Some support for accommodation will also be provided to support regional student exchange.

**Incentive for University**

The planned facility renovations of existing building on Nyarugenge Campus, where the Centre is to be hosted, including upgrading of existing laboratories and installation of new laboratory equipment, shall immensely benefit the Centre and the University. The facility shall be accessed by the entire fraternity of the University of Rwanda. Through the admission of foreign partner students, foreign partner faculty visits, and exchange programmes, the Centre anticipates additional value to the learning and research environment through increased specialization and broadened perspective in the area of energy studies. Subscription to high impact journals by the Centre will also benefit the university and regional partners immensely by role modelling academic standards, motivating faculty development and increasing high impact publications.

**Incentive for Private Sector**

The private will have access to testing and simulation laboratory through various researches in collaboration with the Centre. Various players in the private sectors in the regional shall collaborate with academia to engage in research project due to its unique approach in closing the gap in the area of renewable energy through capacity building. It is envisioned that the Centre shall inject new approaches addressing shortage of energy supply through offering alternative off grid systems of energy through the use of Micro Grid Systems. The project will help them harness energy generation through the use of various renewable sources as determined by the various environmental parameters. With this rural and remote areas that are otherwise hard to connect to the National Power Grids are expected to experience the benefit of their socio-economic well-being through the ripple effects of these energy systems. The development of human capacity in the field of alternative energy sources in the region at present times and in the future is expected to grow the energy sector and other sectors of the economy. All partners appreciate the benefit in conferences, research publications, and outreach activities.

**Incentive for gender balance and minority group**

The Centre has made special provision to facilitate equality on issues of gender. This has been realized through the hiring of staff in both administrative and academic areas. Female scientists, minorities, and faculty from the region have also been specially considered. The aim is to encourage women scientists and minority as much as possible to contribute in the development of their countries Energy Sector. The partners will also be sponsored to attend regional and internal conferences by the ACEESD annually to represent their participation in the Centre.

**Table 5: Incentive system**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Project title/Role*** | ***Discipline*** | ***Motivating factors*** | ***Incentive required/offered*** |
| CST – UR Campus | Academic | Testing and simulation facility within the Region | Acquisition of state of the art laboratory |
|  |  | Upgrading of Library resources | access to online journal and new publication in the Library |
|  |  | Improvement of facilities within the campus for both teaching and administrative staff of lead institution and partners. | Renovation of existing infrastructure and facilities at the Host Institution. |
| Project Leader | Project Leader | Hiring of administrative and research lab engineers to offer support services | Recruitment of relevant staff Support |
| Lead / Host Institution | Key Faculty Member | Attending Conferences to present relevant Scientific papers | Facilitation of travel, accommodation and conference admission fees |
|  |  | High impact research and publishing of findings | Competitive Research and Publication |
| Lead / Host Institution | Key Faculty Member | Provision of Research equipment | Acquisition of equipment for staff for use to undertake research in order to deliver on their DLRs |
| Lead / Partner institutions | Teaching and Research | Faculty exchange / visits | Facilitation of travel cost for key staff and scientific partner |
| Students | PhD / Masters | Creating Job Creator Programme | Turning successful research project into business, and ensure student benefit from their innovation |
| Students | PhD / Masters | Placement for internship and research | Establish strong link with the private sector / industry , for ease of placement to undertake internship and research |
| Private Sector | Energy Sector | State of the Art laboratory for testing and stimulation of Micro Grid Energy systems | Unrestricted access on appointment to the Centres laboratory of undertake testing and stimulation with students and faculty members |
| Gender balance and Minority Group | All areas related to the Centre | Application of affirmative action on gender equality and minority group in the running of the Centre. | Equitable access to employment and other opportunities that the Centre has to offer |

## Environment safeguards

*(Insert the Environmental Management Plan (from safeguard screening) and disclosed on your website, please list responsible staff)*

College of Science and Technology, University of Rwanda through its Technical Design Office shall oversee the implementation and monitoring of the Environmental Management Plan (EMP). The Unit is headed by the Dean of the School of Architecture and Built Environment, **Architect WambeteSoita**(Regd. Arch, m.a.a.k), who is a registered and practicing architect, with 13 years of experience in the built environment.

The list of other parties who will be involved in the Implementation and Monitoring of EMP complete with the EMP methodology has been disclosed on the University of Rwanda – College of Science and Technolgy.

Refer to the following link for the full ESMP document with further details: <http://cst.ur.ac.rw/documents/announcements/18.02.16ACEESD%20EMS%20Plan.pdf>

# PERFORMANCE MONITORING

Table 4: Overview of Disbursement Linked Indicators (DLI) and Disbursement Linked Results (DLR)

*(Please insert the Result Framework shared with IUCEA, and please indicate planned disbursement as a function of the expected results)*

| **Disbursement Linked Indicator** | **Action to be Completed** | **Amount (USD) of the Financing Allocated**  **Per DLI**  **(expressed in *Special Drawing Rights* (SDR))** | **Amount (USD) Allocated per DLR for the Disbursement Calculation**  **(expressed in SDR)** |
| --- | --- | --- | --- |
| **DLI #1:** Institutional readiness  Total amount 1,100,000  (expressed in USD equivalent) | **DLR#1.1**:  To meet Conditions for Effectiveness  Sign funding and performance agreement between the University and the Government of Rwanda  **DLR#1.2:**Development of detailed implementation plans | $600,000  $500,000 | $600,000  $500,000 |
| **DLI#2**:  Excellence in education and research capacity and development impact  Total amount 3,960,000  (expressed in USD equivalent) | **DLR#2.1:** Timely annual implementation of the plans  **DLR# 2.2:**Newly enrolled students in the ACE of which at least 20% must be regional (African) students.   * New Masters Students (120)   84 National; 59 Male; 25 Female  36 Regional; 26 Male; 10 Female   * New PhD students (40)   26 National; 17 Male; 9Female  14 Regional; 8 Male; 6 Female   * New Short Course Students (80)   60 National; 48 Male; 12 Female  20 Regional; 14 Male; 6 Female  **DLR#2.3:** Accreditation of quality of education programs.   * National Accreditation for 4programmes * International Accreditation for 1programmes   **DLR#2.4:** Collaboration and partnerships for applied research and training  New collaboration and partnerships for applied research for a minimum of two years.   * 2 public institutions collaboration and partnership MoUs signed * 3 privates sector/industry collaboration and partnership MoUs signed   **DLR#2.5:** Peer-reviewed journal papers or peer-reviewed conference papers prepared collaboratively with regionally or international partners   * 5paper accepted by a peer-reviewed journal with regional author (s) * 3 paper accepted by a peer-reviewed journal with international author (s) * 2 accepted peer-reviewed conference paper with regional author (s)   **DLR#2.6:** Faculty and PhD student exchanges to promote regional research and teaching   * 20 students/staff exchanged locally/ nationally * 28 students/staff exchanged regionally * 10 students/staff exchanged internationally   **DLR#2.7:** External revenue generation (from tuition fees, sale of consultancies, join research, fund raising and donations, or other external sources (70% externally generally generated revenue and 30% internally/nationally generated revenue  **DLR #2.8**: Institution participating in benchmarking exercise.   * ACEESD participate in the Partnership of Applied Sciences, Engineering and Technology (PASET) benchmarking exercise. | $460,000  $ 222,500  $ 172,000  $ 339,000  $ 380,000  $25,200  $17,200  $250,000  $300,000  $60,000  $120,000  $150,000  $75,000  $50,000  $100,000  $280,000  $80,000  $825,000  $95,000 | $460,000  $1,155,900  $550,000  $180,000  $275,000  $460,000  $825,000  $95,000 |
| **DLI#3:** Timely, transparent and institutionally reviewed Financial Management  Total amount 220,000  (expressed in USD equivalent) | **DLR#3.1:** Timely Withdrawal Application supported by financial reporting on the ACE account for the period  **DLR#3.2:** Functioning Audit Committee under the university council  **DLR#3.3:** Functioning internal audit unit for the university  **DLR#3.4:** Transparency of financial management (audit reports, interim financial reports, budgets and annual work plan are all web accessible) | $11,000/year = $55,000  $11,000/year = $55,000  $11,000/year = $55,000  $11,000/year = $55,000 | $220,000 |
| **DLI#4:** Timely and audited Procurement  Total amount 220,000  (expressed in USD equivalent) | **DLR# 4.1** Timely procurement audit report  **DLR#4.2:** Timely and satisfactory procurement progress report | $22,000/year = $110,000  $22,000/year = $110,000 | $220,000 |
|  | **TOTAL** |  | **$5,540,900** |

# DETAILED BUDGET

Table 5: Budget, Project year 1 – 5 with split between host and consortium partners

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Expenditure Category** | **Estimated Costs in (US$)** | | | | | | |  |
| **YR 1** | **YR 2** | **YR3** | **YR 4** | **YR5** | ***Total*** | ***%of ACE Budget*** | ***% Project Budget*** |
| **A: Budget by Activity Plan** | | | | | | | |  |
| *Action Plan 1: Set-up institutional framework for commencement of the ACE* | 60,280 | 51,780 | 48,780 | 48,780 | 48,780 | 258,400 | *5.7* | *4.7* |
| *Action Plan 2: Learning Excellence* | 64,601 | 67,101 | 113,901 | 63,901 |  | 309,505 | *6.9* | *5.6* |
| *Action Plan 3: Research excellence* | 980,000 | 534,990 | 429,990 | 204,990 | 99,990 | 2,249,960 | *49.9* | *40.9* |
| *Action Plan 4: Sustainable Financing* | 2,500 | 19,500 | 19,500 | 19,500 | 19,500 | 80,500 | *1.8* | *1.5* |
| *Action Plan 5: Attracting Academic Staff and Students from the Region* | 46,101 | 46,101 | 46,101 | 46,101 | 13,041 | 197,445 | *4.4* | *3.6* |
| *Action Plan 6:Collaboration with National, Regional and International Partners* | 164,575 | 338,625 | 338,625 | 338,625 | 70,980 | 1,251,430 | *27.7* | *22.8* |
| *Action Plan 7:: Governance and Financial Management* | 41,200 | 1,200 | 1,200 | 1,200 | 1,200 | 46,000 | *1.0* | *0.8* |
| *Programme Management* | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 75,000 | *1.7* | *1.4* |
| *Contingency* | 8,900 | 8,900 | 8,900 | 8,900 | 8,900 | 44,500 | *1.0* | *0.8* |
| **TOTAL** | 1,383,157 | 1,083,197 | 1,021,997 | 746,997 | 277,391 | 4,512,740 |  | ***82.1*** |
| **%** | 30.7 | 24.0 | 22.6 | 16.6 | 6.1 | 100 |  |  |
| **B: Budget by partners** | | | | | | | *% Partner* | *%Project* |
| *CSU* | 6,500 | 20,300 | 15,300 | 15,300 | 15,300 | 72,700 | *7.4* | *1.3* |
| *University of Agder* | 6,500 | 16,000 | 11,000 | 11,000 | 11,000 | 55,500 | *5.6* | *1.0* |
| *Tubitak Research Centre* |  | 4,200 | 4,200 | 4,200 | 4,200 | 16,800 | *1.7* | *0.3* |
| *Public Utility Research Centre (PURC)* |  | 15,300 | 15,300 | 15,300 | 15,300 | 61,200 | *6.2* | *1.1* |
| *Makerere University* | 47,730 | 54,960 | 54,960 | 54,960 | 11,760 | 224,370 | *22.7* | *4.1* |
| *NM-AIST* | 49,740 | 51,930 | 51,930 | 51,930 | 8,730 | 214,260 | *21.7* | *3.9* |
| *AAIT* | 49,740 | 51,930 | 51,930 | 51,930 | 8,730 | 214,260 | *21.7* | *3.9* |
| *SERC* | 25,200 | 31,230 | 16,030 | 16,030 | 6,030 | 94,520 | *9.6* | *1.7* |
| *CMU-R* |  | 4,200 | 4,200 | 4,200 | 4,200 | 16,800 | *1.7* | *0.3* |
| *CBE* |  | 4,200 | 4,200 | 4,200 | 4,200 | 16,800 | *1.7* | *0.3* |
| *REG* |  |  |  |  |  | - | *0.0* | *0.0* |
| *RURA* |  |  |  |  |  | - | *0.0* | *0.0* |
| **TOTAL** | **185,410** | **254,250** | **229,050** | **229,050** | **89,450** | **987,210** |  | ***17.9*** |

# DETAILED ACTIVITY SHEETS (one for each activity in year 1)

### Action Plan 1:Set-up institutional framework for commencement of the ACEESD

**Timeframe: 1st Qtr to 2rdQtr of year 1**

**Activity 1.1** Put in place governance framework, financial management, administrative, procurement, monitoring and evaluation procedures and systems

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | Availability of a legal framework for carrying out the ACEESD objectives | | | | | | | | | | | | | | | |
| ACTIVITY | | 1.2. Put in place governance framework, financial management, administrative, procurement, monitoring and evaluation procedures and systems | | | | | | | | | | | | | | | |
| OUTPUT | | ACEESD Steering Committee (NRC) established; ACEESD account opened; Financial Management, Procurement and M&E procedures formulated. | | | | | | | | | | | | | | | |
| OUTPUT INDICATOR  A Steering Committee established;  An ACE project bank account opened  Procedures manuals for management and administrative, procurement and monitoring and evaluation | | | | | | | | | | | SOURCE OF VERIFICATION  Minutes of Steering Committee meeting;  ACE project bank account details;  Procedures Manuals for procurement, monitoring and evaluation | | | | | | |
| IMPLEMENTATION MILESTONES | | | Establish governance framework, administrative procedures and systems by 2nd**Qtrof year 1.**  Steering Committee for the ACEs in Rwanda will be inaugurated to assume oversight responsibility. ACEESD’s management and administrative structure will be organized by **1stQtryear 1**, to meet the project’s objectives. A designated ACEESD project bank account will be opened by **1stQtryear 1**and ACEESD shall adhere strictly to best financial, procurement, monitoring and evaluation practices during the entire project. | | | | | | | | | | | | | | |
| PROCUREMENT | | | | | | | | N/A | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | Centre Leader, Deputy Centre Leader, CST-UR HRM Directive Administrative Assistant, Finance Officer, Procurement Officer, Monitoring and Evaluation Officer (M&E Officer) | | | | | | | | | | | |
| DURATION: 6 Months | | | | | | | Commencement:**1stQtr year 1** | | | | | | Completion:2nd**Qtr year 1** | | | | |
| PRIMARY CONSTITUENTS: ACEESD, CST-UR | | | | | | | | | PARTICIPANTS: ACEESD Steering Committee, ACEESD Partners | | | | | | | | |
| ASSUMPTIONS | | | | The Government of Rwanda and CST-UR will be supportive at all stages of the contract signing process | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | Budget from current ACEESD’s operational account | | | | | | | | | | | | |
| Budget Line  Analysis | | | | | | | | | | 1stQtr | 2ndQtr | 3rdQtr | | 4thQtr | 5thQtr | 6thQtr | Total |
| 1 | Cost of opening ACEESD Bank Account | | | | | | | | | $1,000 |  |  | |  |  |  | $1,000 |
| 2 | Travel and per diem for Steering Committee members | | | | | | | | |  | $6795 |  | |  |  |  | $6,795 |
| 3 | Logistics for 2 meetings to formulate administrative procedures manuals | | | | | | | | |  | &1,500 |  | |  |  |  | $1,500 |
| TOTALS | | | | | | | | | | $1,000 | $8,700 |  | |  |  |  | $9,295 |

\*This cost component will be funded from the Centre’s current operational budget.

**Action Plan: 1.0 Set-up institutional framework for commencement of the ACE**

**Timeframe: Year 1**

**Activity: 1.2.** Schedule and hold ACE implementation team meetings

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | A transparent project implementation process and a solid platform for taking corrective measures against set objectives, where necessary | | | | | | | | | | | | | | |
| ACTIVITY | | Schedule and hold ACE implementation team meetings | | | | | | | | | | | | | | |
| OUTPUT | | Minutes of meetings.  Four implementation team meetings will be held in each quarter of year 1 of the project to monitor adherence to set objectives, measure deviations from set objectives and take corrective remedies where necessary. | | | | | | | | | | | | | | |
| OUTPUT INDICATOR  Four ACE implementation meetings held – one in each quarter of year 1 | | | | | | | | | | | SOURCE OF VERIFICATION  Record of minutes | | | | | |
| IMPLEMENTATION MILESTONES | | | | Four ACE implementation team meetings held by March 31, 2017 | | | | | | | | | | | | |
| PROCUREMENT | | | | N/A | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | Centre Leader  Deputy Centre Leader  ACEESD Steering Committee  ACEESD Team | | | | | | | | | | | | |
| DURATION: 6 Months | | | | | | Commencement:  **1stQtr year 1** | | | | | | Completion:  **4thQtr year 1** | | | | |
| PRIMARY CONSTITUENTS: Centre Leader and Deputy,  CST-UR; Centre Steering Committee | | | | | | | | PARTICIPANTS: UR-CST College Council; ACEESD Steering Committee; Senate Council | | | | | | | | |
| ASSUMPTIONS | | | All relevant stakeholders and partners will participate and contribute immensely at all meetings | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | Budget from ACEESD’s operational account | | | | | | | | | | | |
| Budget Line  Analysis | | | | | | | 1stQtr | | 2ndQtr | 3rdQtr | | | 4thQtr | 5thQtr | 6thQtr | Total |
| 1 | Logistics for implementation meetings | | | | | | $  1,500 | | $  1,500 | $  1,500 | | | $  1,500 |  |  | $6000 |
| TOTALS | | | | | | | $  1,500 | | $  1,500 | $  1,500 | | | $  1,500 |  |  | $6000 |

**Action Plan: 1.0 Set-up institutional framework for commencement of the ACE**

**Timeframe: 1st Qtr year 1 to 2ndQtr year 1**

**Activity: 1.3.** Build administrative support team for ACEESD

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | Establish an administrative secretariat for the Centre with support staff/team | | | | | | | | | | | | | |
| ACTIVITY | | | 1.3 - Build administrative support team for ACEESD | | | | | | | | | | | | | |
| OUTPUT | | | * Functional centre secretariat that provides effective administrative support for training and research * Timely procurement of goods and services and preparation of financial reports * Rent a vehicle for administrative use of the Centre | | | | | | | | | | | | | |
| OUTPUT INDICATOR  Recruit Executive Advisor  Recruit one Procurement officer, 1 Account/Finance Officer, 1 ICT/Communication officer and 1 M&E officer to run the Secretariat (to be shared with ACEIoT and other ACEs)  Timely procurement of goods and services and preparation of financial reports  Vehicle rental agreement signed with Hiring Company. | | | | | | | | | | | | | | SOURCE OF VERIFICATION  UR-CST Human Resources and Administration Directorate  Centre Leader (Etienne Ntagwirumugara) | | |
| IMPLEMENTATION MILESTONES | | | | July 2016 - Recruit Executive Advisor  November 2016 - Advertise job positions for administrative support staff  December 2016 - Employ one Procurement officer, one Account & Finance Officer, one ICT/Communication officer and one M&E officer to run the Centre. | | | | | | | | | | | | |
| PROCUREMENT | | | | | | N/A | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | UR-CST Human Resources and Administration Directorate  Centre Leader (Etienne Ntagwirumugara), Deputy Centre Leader | | | | | | | | | | |
| DURATION: 1 year | | | | | | | Commencement:**1stQtryear 1** | | | | | Completion:**2ndQtryear 1** | | | | |
| PRIMARY CONSTITUENTS: ACEESD and EEE Faculty,  National and Regional partners  Centre Leader  Deputy Centre Leader | | | | | | | | PARTICIPANTS: UR-CST Human Resources and Administrative Directorate, Centre Leader (Etienne Ntagwirumugara), Deputy Centre Leader, National and Regional partners, EEE Faculty | | | | | | | | |
| ASSUMPTIONS | | Qualified individuals interested in working at the centre are available | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | | | | Salaries | | | | | | | |
| Budget Line Analysis | | | | | 1stQtr | | | | 2ndQtr | 3rdQtr | 4thQtr | | Year 2 | | Year 3 | Total |
| 1 | Salaries | | | | $3000 | | | | $6,750 | $6,750 | $6,750 | | $27,000 | | $27,000 | $77,250 |
| 2 | Communication allowances | | | | $645 | | | | $645 | $645 | $645 | | $2,580 | | $2,580 | $7,740 |
| 3 | Vehicle rental | | | | $4,800 | | | | $4,800 | $4,800 | $4,800 | | $19,200 | | $19,200 | $57,600 |
| TOTALS | | | | | $8,445 | | | | $12,195 | $12,195 | $12,195 | | $48,780 | | $48,780 | $142,590 |

**Action Plan: 1.0 Set-up institutional framework for commencement of the ACE**

**Timeframe:** 3rd **& 4th Quarters of years 1 and 2**

**Activity: 1.4.** Provide institutional capacity training in governance, leadership, data systems and M&E for ACEESD staff

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | * ACEESD Management and Administrative Team receive training in governance, leadership, data systems and M& E | | | | | | | | | | | | |
| ACTIVITY | | | 1.4 – Provide institutional capacity training in governance, leadership, data systems and M&E for ACEESD staff | | | | | | | | | | | | |
| OUTPUT | | | * Administrative support team of ACEESD receive training in reporting procedures and systems for World Bank funded project reporting procedures * All Management, Administrative and Faculty of ACEESD receive governance and leadership training in running a Centre of Excellence | | | | | | | | | | | | |
| OUTPUT INDICATOR   * All Administrative support team are trained in world bank funded project procedures * Management staff undergoes leadership and governance training to build their capacity to run the Centre. | | | | | | | | | | | SOURCE OF VERIFICATION  Attendance and registration forms for training events obtainable at ACE secretariat  ACEESD staff and leadership | | | | |
| IMPLEMENTATION MILESTONES | | | | * Capacity training organised for all administrative support staff by 3th quarter of year 1 * Governance and leadership training organised for Management and faculty of ACEESD by 3rd quarter of year 1 * Second round of capacity trainings organised by 3 & 4th quarters of year two to address shortfalls or skills gab identified in implementation. | | | | | | | | | | | |
| PROCUREMENT | | | | N/A | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | CST Principal; Centre leader; Deputy Centre Leader; World Bank Personnel | | | | | | | | | | | |
| DURATION: 1 year | | | | Commencement: 2nd half of year 1 | | | | | | | | Completion: 2nd half of year 2 | | | |
| PRIMARY CONSTITUENTS: ACCEESD staff | | | | | | | | PARTICIPANTS: All ACCEESD staff | | | | | | | |
| ASSUMPTIONS | | All Management and Administrative staff and structures are in place. World Bank personnel are available to deliver trainings. | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | See budget line analysis below | | | | | | | | | |
| Budget Line  Analysis | | | | | 1stQtr | | 2ndQtr | | 3rdQtr | 4thQtr | | | 2nd Year | 3rd Year | Total |
| 1 | Capacity building training for administrative staff | | | |  | |  | | $1,500 |  | | | $1,500 |  | $3,000 |
| 2 | Capacity building for senior management staff | | | |  | |  | | $1,500 |  | | | $1,500 |  | $3,000 |
|  | TOTAL | | | |  | |  | | $3,000 |  | | | $3,000 |  | $6,000 |

### Action Plan 2: Learning Excellence

**Timeframe: 1stQtryear 1**

**Activity:** 2.1 Develop new Masters and PhD degree programmes

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | Availability of:   * MSc. courses descriptions as part of new degree * PhD programmes as part of new degree | | | | | | | | | | | | | |
| ACTIVITY | | | Develop curriculum for Masters and PhD degree programmes | | | | | | | | | | | | | |
| OUTPUT | | | * Successful development and writing of M.Sc. curricula (Renewable Energy, Power Systems Engineering and Energy management, trade and policy) * Successful development and writing of PhD curriculum | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * All MSc. courses descriptions are written * All PhD programmes have been described * Approval of programmes by CST Senate * Approval of programmes by UR Senate | | | | | | | | | | | SOURCE OF VERIFICATION   * CST-UR Academic Registrar * UR DVC-Academic Affairs and Research * ACEESD secretariat | | | | | |
| IMPLEMENTATION MILESTONES | | | | By end of 1stQtryear 1   * New MSc. courses designed and developed * New PhD programmes developed * Review of PhD courses and PhD programmes handbooks by independent external reviewers | | | | | | | | | | | | |
| PROCUREMENT | | | | * Transports and accommodation for meeting and workshops * Air tickets for international faculty and external reviewers | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | Centre Leader (Prof. Etienne Ntagwirumugara), Deputy Centre Leader, CST-UR Graduate School | | | | | | | | | | | | |
| DURATION: 4 months | | | | | | Commencement: June 2016 | | | | | | | Completion: September 2016 | | | |
| PRIMARY CONSTITUENTS: EEE and ACEESD Faculty, Regional and International Partners, selected incoming graduate students | | | | | | | | PARTICIPANTS:  ACCEESD staff, CSU, Agder, NM-AIST and AAIT partners. | | | | | | | | |
| ASSUMPTIONS | | * Meetings will take place as planned. * External examiners will be available on time * Curriculum approval authority meetings times to be modified to timely approval | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | Travel and accommodation for international air tickets for programmes development.(see the budget line below) | | | | | | | | | | | |
| Budget Line  Analysis | | | | | | | 1stQtr | | 2ndQtr | 3rdQtr | | 4thQtr | | 5thQtr | 6thQtr | Total |
| 1 | Workshop on curriculum development | | | | | | $1,000 | | $2,000 |  | |  | |  |  | $3,000 |
| 2 | Air tickets& per diem for two regional and twointernational faculty to CST for curriculum development | | | | | |  | | $10,200 |  | |  | |  |  | $10,200 |
|  | TOTAL | | | | | | $1,000 | | $12,400 |  | |  | |  |  | $13,200 |

**Action Plan2: *Learning Excellence***

**Timeframe: 1st Qtr year 1**

**Activity:** 2.2. Approval of New Masters and PhD Programmes

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | * New MSc curricula approved * New PhD curricula approved | | | | | | | | | | | | | |
| ACTIVITY | | | * Approval of new Masters and PhD programme | | | | | | | | | | | | | |
| OUTPUT | | | * New curricula ready to be run by the centre * Approval of PhD programmes and MSc. courses by CST and UR Senate | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * Increased number of new student applications * Attracting regional faculty to ACEESD * Accreditation by the Higher Education Council (HEC), Rwanda | | | | | | | | | SOURCE OF VERIFICATION   * The meeting minutes of approval * The approval document * Official letter of approval * ACEESD Secretariat | | | | | | | |
| IMPLEMENTATION MILESTONES | | | | * August 2016 – curriculum ready to be run by centre and for approval * September 2016 – Curriculum submitted to UR-CST Senate * December 2016 – anticipated approval by HEC | | | | | | | | | | | | |
| PROCUREMENT | | | | Accreditation fees to HEC | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | Centre Leader, CST-UR Principal, UR DVC-AAR | | | | | | | | | | | | |
| DURATION: 2 months | | | | | | Commencement: August 2016 | | | | | Completion: September 2016 | | | | | |
| PRIMARY CONSTITUENTS: All UR/SOE faculty, Existing graduate students | | | | | | | | | | | | | PARTICIPANTS: UR/SENATE | | | |
| ASSUMPTIONS | | * The previous phase has completed on time * Meeting schedules of Accreditation Body follows this timeline | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | Department, College Council and UR Senate meetings cost | | | | | | | | | | | |
| Budget Line  Analysis | | | | | | | 1stQtr | 2ndQtr | | 3rdQtr | | 4thQtr | | 5thQtr | 6thQtr | Total |
| 1 | Logistics for curriculum approval meetings (Departmental, School, College and UR Senate) | | | | | |  | $1,500 | |  | |  | |  |  | $1,500 |
| TOTALS | | | | | | |  | $1,500 | |  | |  | |  |  | $1,500 |

**Action Plan2: *Learning Excellence***

**Timeframe: 2nd Qtr to 3rd Qtr year 1 and then year 2**

**Activity**2.3: Obtain accreditation for Masters and PhD programmes

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | Accreditation of new MS and PHD programmes | | | | | | | | | | | | | |
| ACTIVITY | | | Obtain Accreditation for Masters and PhD programmes | | | | | | | | | | | | | |
| OUTPUT | | | * National accreditation for new curriculum by HEC * Regional or International accreditation for new curriculum | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * All programs are accredited by Rwanda’s Higher Education Council * All programs are accredited by a regional and/or international accreditation board | | | | | | | | | | | | | | SOURCE OF VERIFICATION   * The certifications of accreditation | | |
| IMPLEMENTATION MILESTONES | | | | November2016 – Curriculum submitted for national accreditation  November 2016 – Initiate consultations for International accreditation of Masters and PhD programmes January 2018 - Meetings for preparation of International accreditation  February/Match 2018 - Submit Curriculum for international accreditation  April 2018– Accreditation preparedness assessment visit  By December, 2018 – Anticipated accreditation received from the accreditation board | | | | | | | | | | | | |
| PROCUREMENT | | | | * Accreditation fees/honoraria to international accreditation board | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | | | DVC-AAR UR, Centre Leader | | | | | | | | |
| DURATION: 7 Months | | | | | | Commencement: July 2016 | | | | | | Completion: November 2016 | | | | |
| PRIMARY CONSTITUENTS:  All SOE faculty | | | | | | | | | PARTICIPANTS:   * All SOE faculty; Accreditors | | | | | | | |
| ASSUMPTIONS | | Meeting schedules of accreditation bodies follow this timeline | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | Travel for international accreditors must be covered as well as any international accreditation fee/honoraria. | | | | | | | | | | | |
| Budget Line  Analysis | | | | | | | 1stQtr | | 2ndQtr | 3rdQtr | 4thQtr | | Year  2 | | Year  3 | Total |
| 1 | National Accreditation of the 2 MSc and 3 PhD Programmes | | | | | |  | | $3,000 |  |  | |  | |  | $3,000 |
| 2 | Regional or International Accreditation of the 1 MSc and 1PhD programme | | | | | |  | |  |  |  | |  | | $50,000 | $53,000 |
| TOTALS | | | | | | |  | | $3,000 |  |  | |  | | $50,000 | $53,000 |

**Action Plan 2: *Learning Excellence***

**Timeframe: Q1 of year 2**

**Activity:** 2.4 Develop Professional Short Courses

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | Professional development courses developed | | | | | | | | | | | | | | | |
| ACTIVITY | | 2.4 Develop Professional Short Courses | | | | | | | | | | | | | | | |
| OUTPUT | | Curriculum for short courses developed.  1. Short course on micro-grid systems performance analysis;  2. Short course on Economic evaluation of renewable energy technologies  Short courses and professional trainings outline developed | | | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * Call for application and advertisement of short courses | | | | | | | | | | | SOURCE OF VERIFICATION   * Secretariat of ACEESD * Short courses description book or flyer | | | | | | |
| IMPLEMENTATION MILESTONES | | | | * June 2017 - Outline professional development course program * September 2017 – Curricula for short courses and training developed | | | | | | | | | | | | | |
| PROCUREMENT | | | | N/A | | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | | | | | | | MSc/PhD programme Coordinators; EEE Faculty, Faculty of CMU-R; Industry partners | | | | | |
| DURATION: 4 Months | | | | | Commencement: June 2017 | | | | | | | | | Completion: September 2017 | | | |
| PRIMARY CONSTITUENTS:  EEE and ACEESD Faculty; CMU-R Faculty | | | | | | | | PARTICIPANTS:  MSc/PhD programme Coordinators, EEE and ACEESD Faculty; industry and international partners | | | | | | | | | |
| ASSUMPTIONS | | | N/A | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | | See budget line below | | | | | | | | | | |
| Budget Line  Analysis | | | | | | 1stQtr | | | 2ndQtr | 3rdQtr | | | 4thQtr | | Year 2 | Year 3 | Total |
| 1 | Curricula development | | | | |  | | |  |  | | |  | | $20,000 |  |  |
| TOTALS | | | | | |  | | |  |  | | |  | | $20,000 |  | $20,000 |

**Action Plan 2: *Learning Excellence***

**Timeframe: Year 2 (and all subsequent years)**

**Activity:** 2.5 Enrol Students into Masters programmes

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | | * Enrol 30 Master’s students into various MSc programmes (year 2) * Deliver Masters curriculum to students * Students assisted to meet research requirements | | | | | | | | | | | | | |
| ACTIVITY | | | | Enrol Students into Masters programmes | | | | | | | | | | | | | |
| OUTPUT | | | | * Enrol 30 students into the masters programmes each year * Each student successfully completes semester one of new curriculum * At least 40% of students have to be Regional students * At least 40% of all students are female students | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * Successful enrolling of 30 students into Master’s program * Composition of students to include 40% regional and 40% female students * Students complete coursework in year one on schedule * Students complete research thesis in year one | | | | | | | | | | | | | | | SOURCE OF VERIFICATION   * CST-UR Graduate School * DVC-AAR, UR * ACEESD Secretariat | | |
| IMPLEMENTATION MILESTONES | | | March 2017 – Advertise and accept applications for existing and new programs May 2017 – Review applications and short list  June 20171st& 2nd weeks – Acceptance offered to selected students September 2017 1st week – Students begin course work | | | | | | | | | | | | | | |
| PROCUREMENT | | | * Advertisement for program in the national newspapers and TV * Online Advertisements | | | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | | | | | | DVC-AAR UR, Centre Leader, UR Registrar | | | | | | |
| DURATION: 2 Months | | | | | | Commencement: March 2017 | | | | | | | Completion: September 2017 | | | | |
| PRIMARY CONSTITUENTS: ACEESD and EEE faculty, All applicants to MSc program | | | | | | | | | PARTICIPANTS: MSc programme Coordinators  CST-UR Graduate School  Dean, School of Engineering | | | | | | | | |
| ASSUMPTIONS | | * Enough applicants reply to call for new students * The quality of the applicants is high enough for acceptance into the program | | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | * Advertisement for applicants paid for by the University of Rwanda. * Logistics and supplies will be procured through the standard & World Bank compliant procurement. Scholarships to be awarded based on merit to new students | | | | | | | | | | | | |
| Budget Line Analysis | | | | | | | 1stQtr | 2ndQtr | | 3rdQtr | | 4thQtr | | Year 2 | | Year 3 | Total |
| 1 | Advertisement | | | | | |  |  | | $32,603 | |  | | $32,603 | | $32,603 | 97,809$ |
| 2 | Scholarships – regional | | | | | |  |  | |  | |  | | $54,000 | | $54,000 | $108,000 |
| TOTALS | | | | | | |  |  | |  | |  | |  | |  | $205,897 |

**Action Plan 2: Learning Excellence**

**Timeframe:** Year 1 (and all subsequent years)

**Activity2.6:** Enrol Students into PhD programmes

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | * Enrol 10 PhD students in the programmes * Deliver curriculum to PhD students each year * Support students to achieve research requirements | | | | | | | | | | | | | |
| ACTIVITY | | | Enrol Students into PhD programmes | | | | | | | | | | | | | |
| OUTPUT | | | * Enrol 10 students in into the PhD programmes * Each student successfully completes new curriculum * At least 30% of regional and 40% female students * Research proposals of students approved in year one of new curriculum | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * Successful enrolment of 10 students and in subsequent years (10 in year 2,3, 4 and 5) * At least 30% of regional and 40% female students * Student complete required coursework in year one * Students complete their research and thesis in 4 years * Support to students to obtain grants | | | | | | | | | | | | | SOURCE OF VERIFICATION   * CST-UR Graduate School * DVC-AAR, UR * Electrical and Electronics Engineering Department | | | |
| IMPLEMENTATION MILESTONES | | | | September 2016 – Advertise and accept applications for existing and new programs September 2016 – Review applications and short list for interview October 2016 1st& 2nd weeks – Interview applicants October2016 3rd week – Acceptance offered to selected students October 2016 4th week – Students begin course work  December 2016 – Research proposals of students approved | | | | | | | | | | | | |
| PROCUREMENT | | | | * Advertisement for program in the national newspapers and TV * Online Advertisements | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | | | | | DVC-AAR UR, Centre Leader, UR Registrar | | | | | | |
| DURATION: 4 Months | | | | | Commencement: September 2016 | | | | | | | Completion: December 2016 | | | | |
| PRIMARY CONSTITUENTS: ACEESD and EEE faculty, All applicants to MSc program | | | | | | | PARTICIPANTS:  MSc programme Coordinators; CST-UR Graduate School  Dean, School of Engineering, EEE Faculty, ACEESD academic partners | | | | | | | | | |
| ASSUMPTIONS | | * Enough applicants reply to call for new students * The quality of the applicants is high enough for acceptance into the program | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | Advertisement of programmes and scholarships for students | | | | | | | | | | |
| Budget Line  Analysis | | | | | | 1stQtr | | 2ndQtr | 3rdQtr | | 4thQtr | | | Year 2 | Year 3 | Total |
| 1 | Advertisement | | | | | $8,150 | |  |  | |  | | | $32,603 | $32,602.5 | $73,355 |
| 2 | Scholarships – regional | | | | |  | | $13,300 | $13,300 | | $13,300 | | | $53,200 | $53,200 | $146,300 |
| 3 | Scholarships – national | | | | |  | | $11,050 | $11,050 | | $11,050 | | | $44,200 | $44,200 | $121,550 |
| TOTALS | | | | | | $8,150 | | $24,350 | $24,350 | | $24,350 | | | $130,002.5 | $130,002.5 | $341,205 |

### Action Plan 3: Research excellence

**Timeframe: 4thQtr Year 1 to 4thQtr Year 3**

**Activity**3.1 Set-up a micro-grid research laboratory

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | | Procure Micro-grid laboratory and associated equipment and lab supplies  Install Micro-grid laboratory and undertake all test runs  Capacity building of lab engineers and key faculty in operation of lab | | | | | | | | | | | | | |
| ACTIVITY | | | | 3.2 Set up micro-grid laboratory | | | | | | | | | | | | | |
| OUTPUT | | * Improved research labs and training equipment * Establishment of micro-grid lab * Relevant faculty and lab engineers trained and operation and maintenance of lab. * Operation and maintenance procedures and rules established and documented. * Procure students training and laboratory supplies for micro-grid lab | | | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * Improved research labs and training equipment * Establishment of micro-grid lab * Relevant faculty and lab engineers trained and operation and maintenance of lab. * Operation and maintenance procedures and rules established and documented. * Procure students training and laboratory supplies for micro-grid lab * Students undertake research and coursework in new laboratory | | | | | | | | | | | | | | SOURCE OF VERIFICATION   * Procurement documentation * ACEESD Micro-grid laboratory(KIST 4 building * Centre Leader. | | | |
| IMPLEMENTATION MILESTONES | | | | | | * By May 2017:  Assessments, technical design and specification for micro-grid laboratory procurement * By June 2017: Initiate Procurement process for micro-grid lab and associated equipment and lab supplies. * By September 2017: Delivery of lab, equipment, room to house lab refurbished. * By November 2017: Installation of the micro-grid lab at the centre, test running, training of faculty, lab engineers and relevant staff on operation and maintenance of the lab. * By the end of June 2019, the remaining 4 components of lab installed and operational. | | | | | | | | | | | |
| PROCUREMENT | | | | | | Laboratory and associated supplies and equipment | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | CST-UR Procurement unit, Centre Leader, Centre Procurement officer and Account/Finance Officer | | | | | | | | | | | |
| DURATION: One year | | | | | | | Commencement: May 2017 | | | | | | Completion: November, 2017 | | | | |
| PRIMARY CONSTITUENTS: CST-UR Procurement, ACEESD Procurement Officer, Centre Leader, CST-UR Estates Unit, EEE and ACEESD Faculty, Students of the Centre | | | | | | | | | | | PARTICIPANTS: CST-UR Procurement office, ACEESD Procurement Officer, Centre Leader,Ministry of Finance, Colorado State University | | | | | | |
| ASSUMPTIONS | | | Procurement process run smoothly without any delays  Successful shipment of laboratory equipment and supplies  Successful remodel of room to house Micro-grid lab | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | Cost of undertaking procurement process  Cost of laboratory, equipment and supplies  Cost of installation of lab and equipment  Cost of remodel room to house lab  Cost of training staff in operating and maintenance of the lab. | | | | | | | | | | | | |
| Budget Line Analysis | | | | | | | | 1stQtr | 2ndQtr | 3rdQtr | | 4thQtr | | | Year 2 | Year 3 | Total |
| 1 | Lab development cost (including installation; and training of staff) | | | | | | |  |  |  | | $270,000 | | |  |  | $270,000 |
| 2 | Cost for purchase and shipment of micro-grid lab and associated equipment | | | | | | |  |  |  | | $390,000 | | |  |  | $390,000 |
| 3 | Refurbishing room to house micro-grid lab | | | | | | |  |  |  | | $100,000 | | |  |  | $100,000 |
| TOTALS | | | | | | | |  |  |  | | $720,000 | | |  |  | $760,000 |

**Action Plan 3: *Research excellence***

**Timeframe: Year one**

**Activity**: 3.2 Refurbish students’ lecturing facilities and set up an e-Learning platform

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | - E-learning platform set up  - Improved learning conditions for students for high impact research | | | | | | | | | | | | | | |
| ACTIVITY | | | Remodel students’ lecturing facilities and set up an e-Learning platform | | | | | | | | | | | | | | |
| OUTPUT | | | * Students lecture facilities remodeled   Remodel Masters’ room into ultramodern lecture facility. Purchase of Projector and projector screen, and audio-visuals equipment. Classroom furniture and fittings (chairs, tables) will be redesigned to meet world class status.   * An e-Learning platform procured and installed for students to enhance teaching and learning.   Purchase 60 state-of-the-art computers (Core i5 processor) and 20 laptop computers. Rewiring of lecture rooms to increase internet bandwidth connectivity for accessing e-learning resources among other. Purchase of 2 Smartboards and 4 Projectors.   * Subscribe to electronic library and e-journals (IEEE/IET) | | | | | | | | | | | | | | |
| OUTPUT INDICATOR  Students lecture rooms remodelled and equipped with 60 state-of-the-art core i5 computers, 20 laptop computers, 2 smartboards, 4 projectors, high-speed internet connectivity and other IT devices. Electronic library and e-journals subscriptions purchased. | | | | | | | | | | | | | | | SOURCE OF VERIFICATION  Procurement Documents | | |
| IMPLEMENTATION MILESTONES | | | | * Refurbishment of existing students class rooms into modern lecture rooms and electronic library and e-journals subscribed to by July 2017 | | | | | | | | | | | | | |
| PROCUREMENT | | | | Classroom desks and chairs, Computers, Smartboards, Projectors, Software and Licenses | | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | CST-UR Procurement unit, Centre Leader, Centre Procurement officer and Account/Finance Officer | | | | | | | | | | | | |
| DURATION: one year | | | | | | Commencement: July, 2016 | | | | | | | Completion: July, 2017 | | | | |
| PRIMARY CONSTITUENTS:  CST-UR Procurement, ACEESD Procurement Officer, CST-UR Estates Unit | | | | | | | | | | PARTICIPANTS:  CST-UR Procurement, ACEESD Procurement Officer, Centre Leader, EEE and ACEESD Faculty, Students of the Centre | | | | | | | |
| ASSUMPTIONS | | Strict adherence to procurement rules and procedures of CST-UR | | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | | | Budget of ACEESD | | | | | | | | | |
| Budget Line  Analysis | | | | | | | 1stQtr | | 2ndQtr | | 3rdQtr | 4thQtr | | Year 2 | | Year 3 | Total |
| 1 | Tender documents preparation costs | | | | | |  | |  | |  | $1,000 | |  | |  | $1,000 |
| 2 | Refurbishment of existing classrooms (ICT equipment, rewiring etc.) | | | | | |  | |  | |  | $50,000 | |  | |  | $50,000 |
| 3 | Furniture (students desks) | | | | | |  | |  | |  | $6,000 | |  | |  | $6,000 |
| 4 | e-learning Software cost, licenses and training | | | | | |  | |  | |  | $15,000 | |  | |  | $15,000 |
| 5 | Electronic Library and journal subscriptions (IEEE/IET) | | | | | |  | |  | |  | $15,000 | | $15,000 | | $15,000 | $45,000 |
| 6 | 60 Desktop and 20 laptop computers and accessories | | | | | |  | |  | |  | $68,000 | |  | |  | $68,000 |
| 7 | 2 Smartboards | | | | | |  | |  | |  | $12,000 | |  | |  | $12,000 |
| 8 | 4 Projectors | | | | | |  | |  | |  | $8,000 | |  | |  | $8,000 |
| TOTALS | | | | | | |  | |  | |  | $175,000 | |  | |  | $205,000 |

**Action Plan: *Research excellence***

**Timeframe: Year 1 (3rd quarter) to Year 2 (2nd quarter) and subsequent years**

**Activity**: 3.3. Joint research projects with regional and national institutions

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | Engage in collaborative research projects with partners to support training of students at partner institutions | | | | | | | | | | | | | | | |
| ACTIVITY | | 3.3. Joint research projects with regional and national institutions | | | | | | | | | | | | | | | |
| OUTPUT | | Active collaborative research projects to support training of ACEESD student in partner institutions ongoing. | | | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * Number of collaborative research projects between Centre and partners * Number of trainees from partner institutions at ACEESD Number of regionally co-authored publications | | | | | | | | | | | | | | | SOURCE OF VERIFICATION  Centre leader  MSc/PhD Programme Coordinators, all partner institutions | | |
| IMPLEMENTATION MILESTONES | | | | July 2017 – Develop research proposals for collaborative research with partner institutions  October 2017 – Sign collaborative research agreements with partner institutions  November 2017 – Begin collaborative research and training with partner institutions  January 2018 onwards – continue with research. | | | | | | | | | | | | | |
| PROCUREMENT | | | | Consumables, lab supplies | | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | Centre Leader, ACEESD Associate Researcher, all regional and international partners | | | | | | | | | | | | |
| DURATION: 9 months | | | | | | Commencement: January, 2017 | | | | | | | | Completion: September, 2017 | | | |
| PRIMARY CONSTITUENTS:  ACEESD and EEE faculty,  National and regional partners | | | | | | | PARTICIPANTS:  Centre leader (Etienne Ntagwirumugara); ACEESD Associate Researcher; MSc/PhD Coordinators  Regional and national partners; Regional and National students; ACEESD Faculty | | | | | | | | | | |
| ASSUMPTIONS | | | All partners collaborate and achieve deliverables on time | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | | | Field work, surveys, consumables, lab tests | | | | | | | | | |
| Budget Line  Analysis | | | | | | | | | 1stQtr | 2ndQtr | 3rdQtr | 4thQtr | 2nd year | | | 3rd year | Total |
| 1 | Research budget for 3-focused research groups | | | | | | | |  |  |  |  | $150,000 | | |  | $150,000 |
| 2 | Cost for fieldworks and equipment fees | | | | | | | |  |  |  |  | $15,000 | | | $15,000 | $30,000 |
| 3 | Regional and International travel for 8 workshops / conferences | | | | | | | |  |  |  |  | $67980 | | | $67980 | $376,200 |
| TOTALS | | | | | | | | |  |  |  |  | $232,980 | | | $82,980 | $315,960 |

**Action Plan: *Research excellence***

**Timeframe: Year two (and subsequent years)**

**Activity**: 3.4. Recruit One Full-time Faculty; one Associate Research Officer and two Research Lab Engineers

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | | | **Effective coordination of student research projects, research grant applications and research publications** | | | | | | | | | | | | | | |
| ACTIVITY | | | | | 3.4 Recruit One Full-time Faculty; one Associate Research Officer and two Research Lab Engineers | | | | | | | | | | | | | | |
| OUTPUT | | One full-time faculty, one Associate Researcher and two research lab engineers recruited to support faculty  Efficient coordination of the preparation and submission of research grant proposals  Efficient coordination of research projects of Masters and PhD students  Efficient coordination and execution of student research projects | | | | | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * Number of publications and conference papers/abstracts from students projects * Number of grant proposals prepared and submitted * % of centre’s research executed on time | | | | | | | | | | | | | | SOURCE OF VERIFICATION  Executive Advisor  MSc/PhD Coordinators  Journal database – Sciencedirect/Elsevier;  CST-UR Directorate of Postgraduate Studies, Research and Publications | | | | | |
| IMPLEMENTATION MILESTONES | | | | July 2017 – Recruit one Full-time Faculty and one Associate Researcher and two Research Laboratory Engineers (who will actively participate in installation of Micro-grid laboratory and undergo all training).  September 2017– continuous: development of student research work and preparation of grant proposals  October 2017 – submit grant applications. | | | | | | | | | | | | | | | |
| PROCUREMENT | | | | | | | | | | | N/A | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | UR-CST Human Resources and Administration Directorate, Centre Leader (Etienne Ntagwirumugara), Deputy Centre Leader, MSc/PhD Coordinators, Executive Advisor | | | | | | | | | | | | | |
| DURATION: **One year** | | | | | | | | Commencement: July  **2017** | | | | | | | | | Completion:  **July, 2018** | | |
| PRIMARY CONSTITUENTS:  Centre Leader; Executive Advisor; EEE Faculty; MSc/PhD Coordinators; CST-UR Directorate of Postgraduate Studies, Research and Publications (DPSRP) | | | | | | | | | | | | PARTICIPANTS:  Centre Leader; Executive Advisor; EEE Faculty; MSc/PhD Coordinators; CST-UR Directorate of Postgraduate Studies, Research and Publications; Enrolled Master’s and PhD students. | | | | | | | |
| ASSUMPTIONS | | | Availability of qualified and interested candidate with expertise in renewable micro-grid systems and energy policy and management | | | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | | | | | Salary | | | | | | | | | |
| Budget Line Analysis | | | | | | | 1stQtr | | 2ndQtr | | | | 3rdQtr | | 4thQtr | Year 2 | | Year 3 | Total |
| 1 | Salary | | | | | |  | |  | | | |  | |  | $66,000 | | $66,000 | $132,000 |
| TOTALS | | | | | | |  | |  | | | |  | |  | $66,000 | | $66,000 | $132,000 |

### Action Plan 4: Sustainable Financing

**Timeframe: Year 1 (3rd and 4th Quarters) and subsequent years**

**Activity:** 4.1 Organize industrial short courses and trainings for industry partners

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | Run new Short course on micro-grid systems performance analysis;  Run new Short course on Economic evaluation of renewable energy technologies | | | | | | | | | | | | | | | | | |
| ACTIVITY | | 4.1 Organize industrial short courses and trainings for industry partners | | | | | | | | | | | | | | | | | |
| OUTPUT | | | 20 students trained in micro-grid systems performance analysis;  10 students trained in Economic evaluation of renewable energy technologies | | | | | | | | | | | | | | | | |
| OUTPUT INDICATOR  Application number for short courses  Enrolment in short courses  Regional and women’s representation in short courses (at 20%) | | | | | | | | | | | | | | | | | SOURCE OF VERIFICATION  Secretariat of the ACEESD | | |
| IMPLEMENTATION MILESTONES | | | | | | | January 2018: Photovoltaic systems performance analysis  March/April 2018:Photovoltaics for Rural Electrification  July/August 2018:Economic evaluation of renewable energy technologies | | | | | | | | | | | | |
| PROCUREMENT | | | | | | Catering services, lab supplies, advertisement for short courses | | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | | | | | | MSc/PhD programme Coordinators; ACCEESD leader | | | | | | | | |
| DURATION: 8 **months** | | | | | | | | Commencement: **January 2018** | | | | | | | | Completion:  **July/August, 2018** | | | |
| PRIMARY CONSTITUENTS: Graduate students; Energy professionals, engineers, managers and policy-makers – national and regional; Faculty of EEE, CMU-R and research institutes in Rwanda | | | | | | | | | | | | | | | PARTICIPANTS: Faculty of EEE,  CMU-R; Research institutes in Rwanda; Public Utilities Research Centre (PURC, Florida) | | | | |
| ASSUMPTIONS | | | | Faculty and partners schedules allows for timely development and running of short trainings/courses | | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | Travel for regional and international faculty to run the courses, Scholarships for regional students. Accommodation for national students, catering services | | | | | | | | | | | | | | |
| Budget Line Analysis | | | | | | | | | 1stQtr | 2ndQtr | | 3rdQtr | 4thQtr | Year 2 | | | | Year 3 | Total |
| 1 | Travel & per diem – international faculty | | | | | | | |  |  | |  |  | $8,600 | | | | $8,600 | $17,200 |
| 2 | Travel & per diem – regional faculty | | | | | | | |  |  | |  |  | $6,060 | | | | $6,060 | $12,120 |
| 3 | Logistics for short courses | | | | | | | |  |  | |  |  | $5000 | | | | $5000 | $10,000 |
| 4 | Cost for advertising courses | | | | | | | |  |  | |  |  | $12,000 | | | | $12,000 | $24,000 |
| TOTALS | | | | | | | | |  |  | |  |  | $31,660 | | | | $31,660 | $63,320 |

**Action Plan 4: *Sustainable Financing***

**Timeframe: September 2016 to June 2017 (and subsequent years)**

**Activity:** 4.2 Provide support to ACEESD academic staff to prepare and apply for research grants.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | -Academic staff facilitated to apply for research and consultancy grants.  -Increase externally‐generated funds to ACE and partner institutions | | | | | | | | | | | | | |
| ACTIVITY | | | 4.2 Provide support to ACEESD academic staff to prepare and apply for research grants. | | | | | | | | | | | | | |
| OUTPUT | | | Successful grants applications bring in additional funds for training and research | | | | | | | | | | | | | |
| OUTPUT INDICATOR  Number of new grants won by ACEESD faculty and regional partners  Number of private/industry sector sponsors | | | | | | | | | | SOURCE OF VERIFICATION  CST-UR Directorate of Postgraduate Studies, Research and Publications (PGDS).  CMU-R | | | | | | |
| IMPLEMENTATION MILESTONES | | | By January 2017, identify suitable grant opportunities and hold preliminary discussions with potential private sector sponsors  February 2017: Faculty members begin working in teams to develop grant proposals for peer-review.  June 2017: Peer review of draft proposals and revisions.  July 2017: Submission of proposals to donors/private sector sponsor  August 2017: Submit second round of proposals to donors/private sponsors | | | | | | | | | | | | | |
| PROCUREMENT | | | N/A | | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | ACCEESD Leader, Deputy Centre leader, EEE Faculty, CMU-R Faculty, | | | | | | | | | | | |
| DURATION: 8 months | | | | Commencement: January 2017 | | | | | | | | | Completion: August 2017 | | | |
| PRIMARY CONSTITUENTS:  EEE Faculty, CMU-R Faculty, MSc/PhD Coordinators, Associate Researcher, regional partner university faculty | | | | | | | | | PARTICIPANTS:  ACCEESD Leader, Deputy Centre leader, EEE Faculty, CMU-R Faculty, MSc/PhD Coordinators, Associate Researcher, regional partner university faculty | | | | | | | |
| ASSUMPTIONS | | Successful identification of potential donors or private sector sponsors supportive of Centre’s research ideas. | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | See budget line below. | | | | | | | | | | |
| Budget Line Analysis | | | | | | | 1stQtr | 2ndQtr | | | 3rdQtr | 4thQtr | | 5thQtr | 6thQtr | Total |
| 4.2 | Logistics for 3 proposal writing meetings (catering, travel, stationery, venues) | | | | | |  | $500 | | | $500 | $500 | |  |  | $1,500 |
| TOTALS | | | | | | |  | $500 | | | $500 | $500 | |  |  | $1,500 |

**Action Plan 4: *Sustainable Financing***

**Timeframe: October 2017 to March 2018 (and subsequent years)**

**Activity:** 4.3. Support Masters and PhD students to apply for research, students and travel grants to support their research and conference attendances and other meetings.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | Raise revenue to Support Masters and PhD students’ research as part of their training and participation at conferences**.** | | | | | | | | | | | | |
| ACTIVITY | | | 4.3. Support Masters and PhD students to apply for research and travel grants to support their research and conference attendances and other meetings. | | | | | | | | | | | | |
| OUTPUT | | | MSc/PhD students secure external grants fellowships to help in their research works. They also obtain knowledge of sourcing research funding. | | | | | | | | | | | | |
| OUTPUT INDICATOR  Number of grant applications submitted by students to donors  Number of students who have won external funding | | | | | | | | | | | | SOURCE OF VERIFICATION  -Centre Leader  -MSc/PhD Coordinators | | | |
| IMPLEMENTATION MILESTONES | | | * October 2017: Identify and prepare the database opportunities for scholarships, fellowships and travel awards * January 2018: MSc/PhD Coordinators, Associate Researcher and EEE faculty assist students to prepare grant proposals. * February/March 2018: preparation, review and submission of proposals to donors or potential private sector sponsors. | | | | | | | | | | | | |
| PROCUREMENT | | | Note applicable | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | ACEESD leaders, University of Rwanda, college of Science and Technology | | | | | | | | | | | | |
| DURATION: 5months | | | | Commencement: **October, 2017** | | | | | | | Completion: February/March**, 2018** | | | | |
| PRIMARY CONSTITUENTS:  ACEESD Masters and PhD students | | | | | | | | PARTICIPANTS:  Centre Leader, Deputy Centre Leader, MS/PhD Coordinators, CMU-R Faculty, EEE faculty, regional faculty | | | | | | | |
| ASSUMPTIONS | | Successful identification of potential donors or private sector sponsors supportive of Centre’s research ideas. | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | See budget line below. | | | | | | | | | | |
| Budget Line Analysis | | | | | | 1stQtr | 2ndQtr | | 3rdQtr | 4thQtr | | | 5thQtr | 6thQtr | Total |
| 1 | Logistics for 2 proposal writing meetings (catering, travel, stationery, venues) | | | | |  |  | | $500 | $500 | | |  |  | $1,000 |
| TOTALS | | | | | |  |  | | $500 | $500 | | |  |  | $1,000 |

### Action Plan 5: Attracting Academic Staff and Students from the Region

**Timeframe: Year 2 (and subsequently in other years)**

**Activity:** 5.1 Host educational and outreach programs and seminars in the region (with a target on female students**)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | Increase the number of females trained in Masters and PhD programs | | | | | | | | | | | | | |
| ACTIVITY | | | 5.1Host educational and outreach programs and seminars in the region (with a target on female students**)** | | | | | | | | | | | | | |
| OUTPUT | | | Increase the number of females trained in Masters and PhD programs both nationally and regionally  Increased awareness of Centre’s programs and resources  Increased regional faculty and student recruitment  Increased collaborative research | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * New regional partnership agreements * Number of regional students enrolled * Number of new regional faculty engaged * Regional partners host at least an event with a focus on female students in engineering/policy of energy. * 2 Outreach events to High schools annually dubbed Women in Engineering/Energy * 2 Outreach to national Universities annually dubbed Women in Engineering/Energy * Hosting 1 event as part of each short course training targeting females | | | | | | | | | | | | | | SOURCE OF VERIFICATION   * Center secretariat * Centre Leader * Program Coordinators * Graduate School of CST-UR | | |
| IMPLEMENTATION MILESTONES | | | January – May 2017: Advertise through partner institutions both national and regional Centre’s programs with a focus on females  February 2017 – Hold High School outreach  May 2017 Hold second High School outreach  February 2017: Finalize schedule of regional outreach events  March 2017 – August 2018: Regional partners hold at least one event (with a target on female students)on an ongoing basis  October 2017 & 2018: Evaluate effectiveness of all outreach events | | | | | | | | | | | | | |
| PROCUREMENT | | | N/A | | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | ACEESD/EEE Faculty Member and Team member  CST-UR Directorate of Postgraduate Studies, Research and Publications (PGDS); Executive Advisor; Regional partners; MSc/PhD program Coordinators; Centre Communication/ICT officer | | | | | | | | | | |
| DURATION: 12 months | | | | | Commencement: January 2017 | | | | | | | | Completion: August 2018 | | | |
| PRIMARY CONSTITUENTS:  Prospective students and faculty in sub-region  EEE faculty  CMU-R faculty | | | | | | | | PARTICIPANTS:  ACEESD/EEE Faculty Member and Team member  Existing Masters and PhD students  Partner institutions (national and regional); Prospective students and faculty in region  EEE faculty; CMU-R faculty | | | | | | | | |
| ASSUMPTIONS | | All outreach events reach the right targets (females in particular)  Availability of qualified female candidates | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | Travel, accommodation, per diem to outreach sites. Cost of hosting events (food, logistics, etc), Booth rental at convention | | | | | | | | | | | | |
| Budget Line Analysis | | | | | | | 1stQtr | | 2ndQtr | 3rdQtr | 4thQtr | 5thQtr | | | 6thQtr | Total |
| 1 | Travel and per diem to regional outreach event | | | | | |  | |  |  | $21,060 |  | | |  | $21,060 |
| 2 | Logistics for hosting events at partner institutions | | | | | |  | |  |  | $40,000 |  | | |  | $40,000 |
| 3 | National outreach events to high schools/ universities(2 each) | | | | | |  | |  | $12,000 |  |  | | |  | $12,000 |
| TOTALS | | | | | | |  | |  | $12,000 | $61,060 |  | | |  | $73,060 |

**Action Plan 5: *Attracting Academic Staff and Students from the Region***.

**Timeframe: 3rdQtr of year 1 to 1stQtr of year 2 (and subsequently on an ongoing basis)**

**Activity:** 5.2 Organize advertisement and marketing for ACEESD programs and maintain an active web-presence – development of ACEESD Website.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | Develop and host a dedicated website for ACEESD  Guarantee active information updates on center website; Advertise  Center activities and events on websites of partner institutions and other universities. | | | | | | | | | | | | | |
| ACTIVITY | | | | | 5.2 Organize advertisement and marketing for ACEESD programs and maintain an active web-presence – development of ACEESD Website | | | | | | | | | | |
| OUTPUT | | | | | * Increased website page visit and interest in center’s activities * Development of a user friendly and interactive ACEESD website * Additional outreach and recruitment programs in the sub‐ region * Train staff to regularly maintain and update website | | | | | | | | | | |
| OUTPUT INDICATOR   * Increase in number of applicant to center’s programs and short courses * Increased enrolment of regional students and teaching faculty * Constructive feedback generated from prospective students and faculty through the interactive website. * Certificate of training for center secretariat on website maintenance | | | | | | | | | | | | | SOURCE OF VERIFICATION  ACEESD Administrator,  CST-UR ICT Department  Centre Communication/ICT officer | | |
| IMPLEMENTATION MILESTONES | | | | January2017 – Website developed and running  February 2017 – Continuous: Online interaction by prospective students and faculty  February 2017 – Continuous: website updating  March 2017 – Training of center secretariat staff on website maintenance  May/June/July 2017 – continuous: advertisement of center’s programs and activities on websites of partner institutions and other universities | | | | | | | | | | | |
| PROCUREMENT | | | | | No equipment procured | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | | | CST-UR ICT Department; ACEESD Comm/ ICT officer; | | | | | | | |
| DURATION: 7 months | | | | | | Commencement: January 201 | | | | | | Completion: July 2017 | | | |
| PRIMARY CONSTITUENTS: ACEESD, CST-UR, Government of Rwanda; Prospective students; Prospective faculty; Existing students; ACEESD partners | | | | | | | | | | PARTICIPANTS: Center ICT officer; Prospective students; Prospective School; EEE Faculty; CMU-R Faculty; Existing students; ACEESD partners | | | | | |
| ASSUMPTIONS | | | Internet access should be in place under Activity 3.2. Website hosting costing is borne by CST-UR | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | | Placement of adverts | | | | | | | | |
| Budget Line Analysis | | | | | | | 1stQtr | 2ndQtr | 3rdQtr | | 4thQtr | | 5thQtr | 6thQtr | Total |
| 1 | Advertisement (National and regional) | | | | | |  |  | $13,041 | |  | |  |  | $13,041 |
| TOTALS | | | | | | |  |  | $13,041 | |  | |  |  | $13,041 |

### Action Plan 6: Collaboration with National, Regional and International Partners

**Timeframe: Year 1 (and subsequent years)**

**Activity 6.1:** Sign MoUs with Partners

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | **Sign MoUs with Key national, regional and international partners**  **Increased collaboration with national regional and international partners** | | | | | | | | | | | | | | |
| ACTIVITY | | | | 6.1. Sign MoUs with Partners. | | | | | | | | | | | | |
| OUTPUT | | | | Sign MoU with 5 partners in first year of implementation | | | | | | | | | | | | |
| OUTPUT INDICATOR  5 MoUs signed with partner institutions in year one of project | | | | | | | | | | | | SOURCE OF VERIFICATION  Centre Leader; Principal CST-UR  MoU documents in centre secretariat | | | | |
| IMPLEMENTATION MILESTONES | | | | By end of 1styear of project implementation, 5 MoU will be signed (1 each of International, regional and national academic institution and 2 sector/industrial partners) | | | | | | | | | | | | |
| PROCUREMENT | | | | N/A | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | UR DVC-AAR, Principal CST-UR, ACEESD Leader, Deputy Centre Leader | | | | | | | | | | | | |
| DURATION: **1 Year** | | | | | | Commencement: **July, 2016** | | | | | | | Completion: **June,2017** | | | |
| PRIMARY CONSTITUENTS:  ACEESD, UR, national, regional and international partners | | | | | | | | | PARTICIPANTS:  ACEESD centre, Deputy Centre leader UR, National, Regional & International Partners, UR DVC-AAR, Principal CST-UR | | | | | | | |
| ASSUMPTIONS | | | Cooperation of all parties involved in executing activity. | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | Travel (air tickets) Accommodation, meals and other logistics | | | | | | | | | | | |
| Budget Line  Analysis | | | | | | | 1stQtr | 2ndQtr | | 3rdQtr | 4thQtr | | | Year 2 | Year 3 | Total($) |
| 1 | Travel (air tickets) | | | | | |  |  | | $10,640 |  | | | $10,640 |  | $21,280 |
| 2 | Accommodation (meals, internal travels) | | | | | |  |  | | $7,340 |  | | | $7,340 |  | $14,680 |
| 3 | Logistics for signing events | | | | | |  |  | | $1800 |  | | | $1800 |  | $3600 |
| TOTALS | | | | | | |  |  | | $19,780 |  | | | $19,780 |  | $39,560 |

**Action Plan 6: Collaboration with *National, Regional and International Partners***

**Timeframe: September 2017 to June 2018 (and subsequently every year)**

**Activity 6.2:** Joint supervision/co-supervision of students with faculty from regional and international partners.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | Students have the opportunity to interact with competent experts (regional and international) in the field of renewable micro-grid energy technologies.  Provide centre faculty the opportunity for research collaboration, mentoring and networking | | | | | | | | | | | | | | | | |
| ACTIVITY | | 6.1. Joint supervision/co-supervision of students with faculty from regional and international partners. | | | | | | | | | | | | | | | | |
| OUTPUT | | Increased exposure of Centre students to expert supervision and mentoring. Opportunity for research collaboration, mentoring and networking for centre faculty and students | | | | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * Number of regional and international faculty engaged in supervision or co-supervision of Masters and PhD students * Number of international and regional faculty co-publishing with Centre students and faculty | | | | | | | | | | | | SOURCE OF VERIFICATION   * CST-UR Directorate of Postgraduate Studies, Research and Publication * ACEESD Secretariat * Confirmed acceptance from external engaged * Students of centre. | | | | | | |
| IMPLEMENTATION MILESTONES | | | | | | An ongoing activity (September to June every year) which will be based on availability of regional and international faculty | | | | | | | | | | | | |
| PROCUREMENT | | | | N/A | | | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | | Centre Leader, MSc/PhD Coordinators, Deputy Centre Leader, Executive Advisor | | | | | | | | | | | |
| DURATION: **1 Year** | | | | | Commencement: **September, 2017** | | | | | | | | | | Completion: **June, 2018** | | | |
| PRIMARY CONSTITUENTS:  Regional and international faculty | | | | | | | | | | | PARTICIPANTS:  ACEESD centre, International Scientific Advisory Board; Steering Committee, Faculty of ACEESD partners; ACEESD Faculty; ACEESD students | | | | | | | |
| ASSUMPTIONS | | | Willingness and available of regional and international faculty to visit Rwanda and host Centre students at their home labs. | | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | | | See budget line below | | | | | | | | | | |
| Budget Line Analysis | | | | | | | | | 1stQtr | 2ndQtr | | | 3rdQtr | 4thQtr | | Year 2 | Year 3 | Total($) |
| 1 | Supervision/Co-supervision fees including publication | | | | | | | |  |  | | |  |  | | $52,000 | $52,000 | $104,000 |
| TOTALS | | | | | | | | |  |  | | |  |  | | $52,000 | $52,000 | $104,000 |

**Action Plan 6: Collaboration with *National, Regional and International Partners***

**Timeframe: Year 1 (and subsequent years)**

**Activity 6.3:** Institute Staff and Students exchange programs between ACEESD and regional partners

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | Implement an exchange program between Centre faculty and students and its regional partners to enhance standard of teaching and research | | | | | | | | | | | | | |
| ACTIVITY | | | 6.3. Institute Staff and Students exchange programs between ACEESD and regional partners | | | | | | | | | | | | | |
| OUTPUT | | | Increased number of staff and students (national and regional) visiting ACEESD and going to partner institutions for teaching, research and training.  Improved faculty and students’ learning experience | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * The number of PhD &MSc students exchanged * Number of academic staffs exchanged and period spent at partner sites | | | | | | | | | | | | SOURCE OF VERIFICATION   * + Centre Accounts for Staff   + Letters of requests/appointments | | | | |
| IMPLEMENTATION MILESTONES | | | By end of first year of implementation: signing of MoU with national and regional partners for faculty and students exchange.  Ongoing activity throughout project implementation | | | | | | | | | | | | | |
| PROCUREMENT | | | N/A | | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | | | | ACEESD Leader and Deputy Centre Leader | | | | | | | |
| DURATION: **1 year** | | | | Commencement: **January, 2017** | | | | | | | | | Completion: **June, 2017** | | | |
| PRIMARY CONSTITUENTS: Faculty of all national and regional academic partners | | | | | | PARTICIPANTS:  Steering Committee; Scientific Advisory Board; CST-UR HRM Directorate; Dean of School of Engineering; national partner faculty; regional partner faculty; CMU-R faculty | | | | | | | | | | |
| ASSUMPTIONS | | A good match between the needs of ACEESD and expertise of partner institutions | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | | Travel expenses, Accommodation and Living allowances | | | | | | | | | |
| Budget Line  Analysis | | | | | 1stQtr | | | 2ndQtr | | 3rdQtr | 4thQtr | | | Year2 | Year3 | Total |
| 1 | Travel and per diem for 7 regional faculty to/from centre | | | |  | | | $28,665 | | $28,665 | $28,665 | | | $85995 | $85995 | $257,985 |
| 2 | Travel and per diem for 3 international faculty to/from centre | | | |  | | | $19,600 | | $19,600 | $19,600 | | | $58,800 | $58,800 | $176,400 |
| 3 | Travel and per diem for 10 PhD students to/from centre | | | |  | | |  | |  |  | | | $122850 | $122850 | $245,700 |
| TOTALS | | | | |  | | | $48265 | | $48265 | $48265 | | | $267645 | $267645 | $680,085 |

**Action Plan 6: Collaboration with *National, Regional and International Partners***

**Timeframe: 1Year**

**Activity 6.4:** Support students and staff to undertake short term training and research visits.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | **Facilitate students to visit industry and academic institutions for short term research and or experiential learning.** | | | | | | | | | | | | | | |
| ACTIVITY | | 6.4 Support regional students and staff with travel grants for short term research visits. | | | | | | | | | | | | | | |
| OUTPUT | | * Practical and experiential learning and research training at ACEESD’s industry/sector partners (national and regional). * Outreach opportunities for ACEED students and faculty to work with communities on research projects | | | | | | | | | | | | | | |
| OUTPUT INDICATOR   * The number of research students engaged in industrial placements and internships with partners * Number of staff and students engaged in outreach activities with communities * Each student undertakes a least a month industrial placement | | | | | | | | | | | | | | SOURCE OF VERIFICATION  Executive Advisor  MSc/PhD Coordinators  Regional and National partners | | |
| IMPLEMENTATION MILESTONES | | | | October 2017 – Establish a Small Research Grant Fund at centre to support training needs of staff and students.  October 2017 – Training needs assessments of students and faculty and preparation of visits and internship placement guidelines  November2017 – Match training needs of students and staff ACEESD Centre to Coordinate the research visits and industrial placements.  January 2015 onwards – begin outreach and placement of students for training and research visits at selected institutions | | | | | | | | | | | | |
| PROCUREMENT | | | | N/A | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | ACEESD Leader; Deputy Centre Leader; Executive Advisor; MSc/PhD Coordinators | | | | | | | | | | | | |
| DURATION: **1 year** | | | | | Commencement: **October 2017** | | | | | | | | Completion: **June 2018** | | | |
| PRIMARY CONSTITUENTS: ACEESD Students and faculty; CMU-R faculty; Students and faculty of national and regional partners | | | | | | | | | PARTICIPANTS:  ACEESD Students and faculty; CMU-R faculty;  Centre Research Associate; MSC/PhD Coordinators;  Students and faculty of national and regional partners; | | | | | | | |
| ASSUMPTIONS | | | A good matchbetween research needs/interests of ACEESD students and the training needs of faculty with partners industries and expertise is achieved | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | | Travel expenses, Accommodation and Living allowances | | | | | | | | | |
| Budget Line  Analysis | | | | | | 1stQtr | | 2ndQtr | | 3rdQtr | 4thQtr | Year 2 | | | Year 3 | Total |
| 1 | ACEESD Small Grants Scheme | | | | |  | |  | |  |  | $40,000 | | | $40,000 | $80,000 |
| TOTALS | | | | | |  | |  | |  |  | $40,000 | | | $40,000 | $80,000 |

### Action Plan 7: Governance and Financial Management

**Timeframe:** September 1, 2016 to September, 2017.

**Activity:** 7.1 Setup International Scientific advisory Board.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | Inaugurate a functioning International Scientific Advisory Board with regular meetings | | | | | | | | | | | |
| ACTIVITY | | | Setup International Collaborations and Scientific Boards. | | | | | | | | | | | |
| OUTPUT | | | * Functional External advisory board composed of international experts from academia and industry | | | | | | | | | | | |
| OUTPUT INDICATOR:   * Functional External advisory board that meets regularly and advises the Centre leader and management | | | | | | | | | | | SOURCE OF VERIFICATION  Principal office, Centre leader, Deputy centre leader | | | |
| IMPLEMENTATION MILESTONES | | | * October 2016 – Constitution of scientific advisory board memberships * December 2016 – Obtain University approval of scientific advisory board membership * January 2017 – Inaugural meeting of scientific advisory board * March 2017 : continuous (annually) meeting of Scientific advisory board for the progress of the centre | | | | | | | | | | | |
| PROCUREMENT | | | N/A | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | CST-UR Principal office, UR DVC-AAR, Centre leader, Deputy Centre Leader, Dean of School of Engineering. | | | | | | | | | | | |
| DURATION: 5 months | | | | Commencement: October 2016 | | | | | | Completion: March 2017 | | | | |
| PRIMARY CONSTITUENTS: Faculty of Engineering, national and regional partners | | | | | PARTICIPANTS: CST-UR Principal; DVC-AAR; CST-UR Senate Council; ACEESD International Advisory Board members; Centre Leader, Deputy centre leader EEE Faculty; CMU-R Faculty; Faculty of Regional and international partners | | | | | | | | | |
| ASSUMPTIONS | | University academic calendar and meeting schedules are not disrupted | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | Air tickets & Reception expenses | | | | | | | | | |
| Budget Line  Analysis | | | | | | 1stQtr | 2ndQtr | 3rdQtr | 4thQtr | | | 5thQtr | 6thQtr | Total |
| 1 | Travel and DSA | | | | |  | 13,595 |  |  | | |  |  | $13,595 |
| 2 | Logistics for inaugural meeting | | | | |  | $1,000 |  |  | | |  |  | $1,000 |
| TOTALS | | | | | |  |  |  |  | | |  |  | $14,495 |

**Action Plan 7: *Governance and Financial Management***

**Timeframe:** July, 2016 to June/July 2017 (and subsequent years).

**Activity7.2:** Ensure transparency in financial management by providing web access to budgets, annual work plan, audit reports, financial reports.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | | Sound financial management systems that meets with local and international (World Bank) best practices instituted | | | | | | | | | | | | |
| ACTIVITY | | | | 7.2 Ensure transparency in financial management by providing web access to budgets, annual work plan, audit reports, financial reports | | | | | | | | | | | | |
| OUTPUT | | | | Availability of a restricted web portal with access to financial reports, work plans, audit reports, budgets and evaluation reports. | | | | | | | | | | | | |
| OUTPUT INDICATOR:   * Web access to two half-yearly financial reports and an annual audit reports * Annual budgets, work plans, evaluation reports available on centre website | | | | | | | | | | | | | SOURCE OF VERIFICATION  Published documents on ACEESD website | | | |
| IMPLEMENTATION MILESTONES | | | | Ensure timely reporting of progress.  Ensure timely completion of audit and annual financial reports.  Ensure timeliness of procurement process  Budgets, work plans, audit reports, financial reports published on the website of ACEESD by end of June/July 2017.  Ongoing process: all documents available online by specified time. | | | | | | | | | | | | |
| PROCUREMENT | | | | N/A | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | Centre Leader, Accounts and Finance Officer; Executive Advisor; Communication/ICT Officer; | | | | | | | | | | | |
| DURATION: 1 year | | | Commencement:May2016 | | | | | | Completion: June/July 2016.  Additional 6 months for Audit reports | | | | | | | |
| PRIMARY CONSTITUENTS:  Centre Leader; ACEESD Accounts/Finance officer; Communication/ICT officer | | | | | | | | | | PARTICIPANTS: CST-UR Director of Finance; ACEESD Accounts/Finance officer; Communication/ICT officer; Centre Leader; Deputy Centre leader. | | | | | | |
| ASSUMPTIONS | | ACEESD website and requisite infrastructure is put in place  ICT officer of Centre receives all requisite reports in time for timely upload onto website | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | See budget line below | | | | | | | | | | |
| Budget Line  Analysis | | | | | | | 1stQtr | 2ndQtr | | | 3rdQtr | 4thQtr | | 5thQtr | 6thQtr | Total |
| 1 | Transparency in financial management through publication of budgets, annual work plans, financial and reports, audits , | | | | | |  | 100 | | |  | 100 | |  |  | $200 |
| TOTALS | | | | | | |  |  | | |  |  | |  |  | $200 |

**Action Plan 7: *Governance and Financial Management***

**Timeframe:** August 2016 to December 2016

**Activity:** 7.3 Purchase office equipment, stationery and supplies for administrative team of the centre.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | | | Purchase office equipment, stationery and supplies for administrative team of the centre. | | | | | | | | | | | | |
| ACTIVITY | | | | Purchase office equipment | | | | | | | | | | | | |
| OUTPUT | | * Well‐equipped and resourced secretariat delivering effective administrative support to Centre’s leadership * Timely procurement of goods and services: Office desks, Filing cabinets, Printer/photocopier, scanner, cartridges, * Stationery: A4 reams; Accounting books; Folders, File holders, pens/pencils, clips, staplers, office pins, etc. | | | | | | | | | | | | | | |
| OUTPUT INDICATOR:   * Successful completion of all tendering and bidding process * Office equipment installed and tested * Office supplies and stationery delivered | | | | | | | | | | SOURCE OF VERIFICATION   * Minutes from ACEESD’ centre secretariat about agreement from the accepted tender. * ACEESD Procurement Unit, | | | | | | |
| IMPLEMENTATION MILESTONES | | | | * August2016: Begin procurement for office furniture and equipment * September/October 2016: – continuous: Procurement and delivery of office supplies * December2016: delivery and installation of office furniture and equipment | | | | | | | | | | | | |
| PROCUREMENT | | | | Office furniture, equipment, and supplies | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | CST-UR Procurement office; CST-UR Principal; Centre Leader ; Deputy Centre Leader, Executive Advisor; ACEESD Procurement officer, Accountant/Finance Officer | | | | | | | | | | | | |
| DURATION: 5 months | | | | | Commencement: August 2016 | | | | | | | Completion:December2016 | | | | |
| PRIMARY CONSTITUENTS: Centre Leader; Deputy Centre Leader; CST-UR Principal; Head of Procurement and tender  ACEESD Procurement officer, Accountant/Finance Officer | | | | | | | | | PARTICIPANTS:  CST-UR Procurement office; Centre Leader ; Deputy Centre Leader, Executive Advisor; ACEESD Procurement officer, Accountant/Finance Officer | | | | | | | |
| ASSUMPTIONS | | | Timely procurement processes and delivery of equipment, furniture and supplies | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | Desks, chairs, cabinets, computers, printers, photocopier, supplies | | | | | | | | | | |
| Budget Line  Analysis | | | | | | | 1st Qtr | 2nd Qtr | | | 3rd Qtr | | 4th Qtr | 5th Qtr | 6th Qtr | Total |
| 1 | Desks, chairs, cabinets, computers, printers, photocopier, | | | | | |  | $20,000 | | | $10,000 | | $5,000 |  |  | $35,000 |
| 2 | Supplies (paper, ink, files, books etc) | | | | | |  | 2,000$ | | | 1,000$ | | 1,000$ |  |  | $4,000 |
| TOTALS | | | | | | |  | $22,000 | | | $11,000 | | $6,000 |  |  | $39,000 |

**Action Plan 7: Governance and Finance Management**

**Timeframe:** February 2017 to December 2017 (and subsequently every half year)

**Activity:7.4** Collect, Collate and Analyze Data for Monitoring and Evaluation

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RESULT | | A rigorous data collection system for measuring actual performance against set objectives and monitoring for continues progress and improvement established and in use | | | | | | | | | | | | | | | | |
| ACTIVITY | | 7.4 Collect, Collate and Analyze Data for Monitoring and Evaluation | | | | | | | | | | | | | | | | |
| OUTPUT | | M&E Database developed.  Periodic data collected, analysed and incorporated into the Results Framework during the first year of the project for monitoring and evaluation. This will provide a transparent basis for measuring actual performance against set objectives and monitoring for continues progress and improvement. | | | | | | | | | | | | | | | | |
| OUTPUT INDICATOR  Well-organized M&E database developed  Staff trained in use of M&E database.  Student surveys conducted for all students of centre  Staff evaluation conducted for all faculty of centre | | | | | | | | | | | | | | SOURCE OF VERIFICATION  M&E Database  Centre M&E officer | | | | |
| IMPLEMENTATION MILESTONES | | | | | M&E database developed by February **2017**  Student surveys conducted by December 2017 (then half yearly)  Staff evaluation conducted by December 2017 (then half yearly) | | | | | | | | | | | | | |
| PROCUREMENT | | | | N/A | | | | | | | | | | | | | | |
| RESPONSIBILITY FOR IMPLEMENTATION | | | | | | | | | | Centre Leader, M&E Officer and ACEESD Team | | | | | | | | |
| DURATION: 6 Months | | | | | | Commencement: **June/July 2016** | | | | | | | | | | Completion: **December 2017** | | |
| PRIMARY CONSTITUENTS:  ACEESD M&E officer; Centre management team; partner institutions (national, regional and international) | | | | | | | | | | | PARTICIPANTS:  ACEESD M&E officer; Centre management team; partner institutions (national, regional and international); ACEESD Students and faculty | | | | | | | |
| ASSUMPTIONS | | | All participants will provide the required data needed for effective monitoring and evaluation | | | | | | | | | | | | | | | |
| FINANCIAL IMPLICATIONS | | | | | | | Budget from ACEESD’s operational account | | | | | | | | | | | |
| Budget Line  Analysis | | | | | | | | 1stQtr | 2ndQtr | | | 3rdQtr | 4thQtr | | 5thQtr | | 6thQtr | Total |
| 1.3 | Collect, collate and  analyse data for M&E | | | | | | |  | $500 | | |  | $500 | |  | |  | $1,000 |
| TOTALS | | | | | | | |  | $500 | | |  | $500 | |  | |  | $1,000 |

1. ***World Energy Outlook 2014 Biomass Database*** [↑](#footnote-ref-1)