



Hochschule  
Bonn-Rhein-Sieg

# Remote Lab 4 Engineering (RL4Eng)

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et al.

## Project Partners



Hochschule  
Bonn-Rhein-Sieg



German-Arab  
Transformation Partnership



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service





## WP 2 Development: Training (M7 – M15, Lead: UCLM)

T2.1 YU, BAU, AUT, MU5, CAU, UB, LU, UCLM, SUZA, NM-AIST, HTU, UOP, H-BRS Q3	The first training workshop on remote labs, take-home labs: How the process works at H-BRS.	100% (by Sept. 27th)
T2.2 YU, BAU, AUT, MU5, CAU, UB, LU, UCLM, SUZA, NM-AIST, HTU, UOP, H-BRS Q3	A training workshop on required tools, software for labs development in H-BRS, Germany. The workshop will provide material on tools, software needed, best practices, maintenance issues.	80% (by Sept. 27th)
T2.3 YU, BAU, AUT, MU5, CAU, UB, LU, UCLM, SUZA, NM-AIST, HTU, UOP, H-BRS Q4	An advanced training workshop will be organized at UCLM	
T2.4 YU, BAU, AUT, MU5, CAU, UB, LU, UCLM, SUZA, NM-AIST, HTU, UOP, H-BRS, TAG-ITI Q5	Establishing training material on the training portal at the partner institutions	



## **WP 2 Development: Training (M7 – M15, Lead: UCLM)**

### **Outputs, deliverables**

#### **D2.1 Lead: H-BRS (100%, Sept. 24<sup>th</sup> – 29<sup>th</sup>)**

- **Building individual capacities on remote labs, take-home labs processes at H-BRS**
- **2.1.1 A report of the visit including conclusions of interviews and lessons learnt**

#### **D2.2 Lead: H-BRS (Part I (~80%) Sept. 24<sup>th</sup>-29<sup>th</sup>)**

- **Building capacities on required Tools, software for labs development in HBRS Germany. The workshop will provide material on tools, software needed, best practices, maintenance issues**
- **Remaining part II in Albacete, Spain, Feb. '24 (20%, Andrea)**



## **WP 2 Development: Training (M7 – M15, Lead: UCLM) (cont.) Outputs, deliverables**

### **D2.2 Lead: H-BRS (Part I Sept. 24<sup>th</sup>-29<sup>th</sup>)**

- **Building capacities on required Tools, software for labs development in HBRS Germany. The workshop will provide material on tools, software needed, best practices, maintenance issues**
- **2.2.1 A report of the visit, including a detailed procedure for labs development**
- **2.2.2 Documentation on training material**
- **2.2.3 Professionals trained on the requirements for establishing process**
- **2.2.3.1 Faculties and other trainees become aware of the steps of labs creation and running.**
- **The language for communication, reports and training material will be English.**
- **The target groups will include: students, trainees, administrative staff, technical staff**



## WP 3 Establishing Remote Labs in the Partner Institutions (M15-M27), Tasks & Project Objectives (Lead: H-BRS)

<b>T3.1</b> <b>UCLM, H-BRS, TAGITI</b> <b>Q6</b>	Creation of the training material on Remote labs, take-home labs including and production of training material of WP2, and the corresponding portal	0%
<b>T3.2</b> <b>YU, BAU, AUT, MU5, CAU,</b> <b>UB, LU, UCLM, SUZA, NM-</b> <b>AIST, HTU, UOP, H-BRS Q6</b>	Infrastructure for the remote labs, take home labs (legal and physical). This includes following legal, financial, and equipment-based supportive environments	0%
<b>T3.3</b> <b>TAG-ITI</b> <b>Q6</b>	Creating a portal on remote labs. Such a portal will provide automatic steps for students to use remote labs	
<b>T3.4</b> <b>YU, BAU, AUT, MU5,</b> <b>CAU, UB, LU, UCLM,</b> <b>SUZA, NM-AIST, HTU,</b> <b>UOP, H-BRS, TAG-ITI</b> <b>Q7</b>	Infrastructure for the remote labs, take home labs setup	



## RL4ENG – WP 3 Tasks & Project Objectives (cont.)

<b>T3.5</b> YU, BAU, AUT, MU5, CAU, UB, LU, UCLM, SUZA, NM-AIST, HTU, UOP, H-BRS Q8	Training faculty, staff, students representatives on the operations of remote labs, take-home labs	0%
<b>T3.6</b> YU, BAU, AUT, MU5, CAU, UB, LU, UCLM, SUZA, NM-AIST, HTU, UOP, H-BRS, PS Q8	Remote labs, take home labs establishments at partner institutions. QMC and RLEC will be responsible for coordinating with the partners to make sure that all labs are established on time with no delays.	
<b>T3.7</b> YU, BAU, AUT, MU5, CAU, UB, LU, UCLM, SUZA, NM-AIST, HTU, UOP, H-BRS, PS Q9	Workshops at each of the local coordinators institutions on simulation of a remote labs, take-home labs (train the trainers)	
<b>T3.8</b> YU, BAU, AUT, MU5, CAU, UB, LU, UCLM, SUZA, NM-AIST, HTU, UOP, H-BRS Q9	Local training for students at partners HEIs	



Thank you for your attention!

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# Homework for all academic partners in Lebanon, Tanzania and Jordan

Identify your personal remote lab exercise  
(in Elect. Engineering) !

The underlying idea is that each and every  
remote academic partner is building up  
its own remote lab exercise and at the  
end of the project we will have a total of  
4 RLs (# 1J + 1L + 1M + 1T).

Side effect,

If you join the internat. Remote Lab  
community you will have access to all RL  
of the community





Thank you for your attention!

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<https://www.h-brs.de/de/fpga-vision-lab>

<https://fpga-vision-lab.h-brs.de/weblab/login>



## How did the cooperation come about?

- Two DAAD German-Arab short-term measures: INVENT in 2020 and SDMCT in 2018
- Two EU-funded projects: Tempus IV (2013-'17), Erasmus+ CBHE (2018-'21) projects

## What is the thematic focus?

- Revisit the practical training component in the Electrical Engineering curriculum in general, and study the challenges of delivering it online.
- A first remote lab at YU will get developed and evaluated under real conditions.
- YU laboratories will be conducted remotely, taking advantage of similar experiences at H-BRS, in two modes:
  1. Students will be able to connect to a remote server to do the experiment on the server on another equipment connected to the server
  2. Students will be able to conduct the experiment at home, with remote and synchronous supervision from the teacher.

