



ERASMUS+ PROGRAMME

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EGREEN:

Development of Environmental Engineering Courses and Injection of Climate Change Concept For Undergraduate Curriculum

**Minutes
of
The Fifth Steering Committee Meeting**

**University of Innsbruck (UIBK)
Innsbruck-Austria**

September 3-4, 2018



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EGREEN Fifth Steering Committee

September 3-4, 2018

Participants list:

No.	Participant Name	Position
The University of Jordan (UJ)		
1.	Prof. Ahmed Al-Salaymeh	EGREEN Project Coordinator
2.	Prof. Mohammad Hamdan	Professor at Mechanical Engineering Department
3.	Dr. Osama Ayadi	Faculty member at Mechanical Engineering Department
4.	Eng. Leena Marashdeh	Research Assistant at School of Engineering
The German-Jordanian University (GJU)		
5.	Prof. Ala'aldeen Al-Halhouli	Professor at Engineering Faculty
Al al-Bayt University (AABU)		
6.	Dr. Moayyad shawaqfeh	Dean of Engineering School
Al-Zaytoonah University of Jordan (ZUJ)		
7.	Dr. Loai Dabbour	Chairman at Architecture department
8.	Eng. Eman Abdelhafez	Lecturer in Alternative energy technology department
Mutah University (MUTAH)		
9.	Prof. Thafer Assaraira	President
10.	Prof. Omer Maaitah	Dean of the Faculty of Engineering
Jordan University of Science and Technology (JUST)		
11.	Prof. Fahmi Abu Al-Rub	Professor at Chemical Engineering Department
Al-Baath University (ABU)		
12.	Prof. Bassam Kseibi	Vice-President for scientific research and higher studies
13.	Prof. Adnan Ghata	Professor at Chemical Engineering Department
Tishreen University (TU)		
14.	Prof. Hazem Hassan	Vice President



15.	Prof. Moussa Al Samara	The Dean of the higher Institute for Environmental Research
Hamburg University of Technology (TUHH)		
16.	Mr. Marvin Scherzinger	Research Assistant
Hochschule Ostwestfalen-Lippe (OWL-UAS)		
17.	Prof. Salman Ajib	Head of the department renewable energies & decentralized energy supplying
18.	Mr. Wolfgang Langner	Assistant
University of Innsbruck (UIBK)		
19.	Prof. Wolfgang Streicher	Professor of Energy Efficient Buildings and Renewable Energies
20.	Dr. Martin Hauer	Research Assistant
Catholic University of Portugal (UCP)		
21.	Dr. Eduardo Cardoso	Assistant Professor and Scientific Officer for Knowledge Transfer, Entrepreneurship and Partnerships at Faculty of Biotechnology
Paulo & Beatriz – Consultores Associados (P&B)		
22.	Dr. Paulo Baptista	Director of P&B/ Chemical Engineer



Day 1

Monday, September 3, 2018

The Opening session

The opening session of the EGREEN Third steering committee meeting included welcome speeches from the representative of the hosting partners, as follow:

- Welcome speech by project coordinator at University of Innsbruck, Prof. Wolfgang Streicher
- Welcome speech by Vice rector at University of Innsbruck Prof. Wolfgang Meixner
- Project coordinator at (OWL UAS), on behalf of the European partners, Prof. Salman Ajib
- President of MUTAH university, on behalf of the Jordanian Partners, Prof. Thafer Assaraira
- Vice President at Al-Baath University, on behalf of the Syrian Partners, Prof. Bassam Kssibi
- Vice President at Tishreen University, on behalf of the Syrian Partners, Prof. Hazem Hasan

After the welcome speech, Prof. Ahmed Al-Salaymeh, Egreen General Coordinator, delivered a presentation about the progress in EGREEN project.

Session (1)

Chaired by Dr. Eduardo Cardoso (UCP)

Partner universities in Jordan and Syria have presented the Project Implementation at their universities, covering the following topics

- ✓ EGREEN team
- ✓ Achievements in Networking
- ✓ Achievements in WP2 (collected surveys)
- ✓ Achievement in WP3 (Role in development process, Final list of courses, Accreditation letter, offered courses next semester and number of enrolled students)
- ✓ Equipment procurement, installation place and usage (supported with photos)
- ✓ Conducted dissemination activities
- ✓ Conducted Quality activities (Submitted progress reports)

Session (3)
Chaired by Prof. Ahmed Al-Salaymeh
WP2: Scoping and training needs

Title	Major Activities	Coordination			Estimated Start\End Date	
		Coordinator	Co-Coordinator	partners involved		
WP2: Scoping and training needs	Task 2.1: Scoping and Market Needs Analysis	UIBK	TU, AABU	All	1.4.2017	1.1.2017 To 1.7.2017
	Task 2.2: Scoping and Market Needs Analysis				1.5.2017	
	Task 2.3: Planning and Methodologies				1.7.2017	

Prof. Wolfgang Streicher (UIBK) presented the results of different surveys (Student survey, Online Complementary questionnaire, Stakeholder, and institution surveys). The following tasks were agreed on during the meeting:

No.	Task	Responsibility	Due Date
1.	Submit student survey report to Quality review	UIBK	Sep 15, 2018
2.	Review WP2 reports and send feedback	GJU	Sep 25, 2018

WP3: Development of Study Plan and Curricula

Title	Major Activities	Coordination			Estimated Start\END Date	
		Coordinator	Co-Coordinator	Other partners involved		
WP3: Development of Study Plan and Curricula	Task 3.1: Workshop on Curricula Updating	HS-OWL	ZUJ, MUTAH, TU	All	1/9/2017	1.8.2017 To 1/4/2018
	Task 3.2: Selection of Pilot Courses and Labs				1/11/2017	



	Task 3.3: Detailed Design of Pilot Courses				1/2/2018	
	Task 3.4: Accreditation of New Curricula				1/6/2018	
	Task 3.5: New Curricula for environment Courses				15/9/2018	
	Task 3.6: Establishment of Environmental lab				15/4/2018	
	Task 3.7: Monitoring and Feedback Methodology and Reports				1/10/2018	

Prof. Salman Ajib, OWL-UAS, presented the tasks and activities of this work package and the action plan for the implementation.

It was obvious that progress in this work package is within the timeline of the proposal. The agreed-on tasks were as follow:

No.	Task	Responsibility	Due Date
1.	Assign JO/SY leaders for EGREEN courses responsible to develop the course as in the table below.	JO Partners SY Partners	-
2.	Submit an official letter indicating the approval of partner university to include the EGREEN courses within the curriculum	JUST and GJU	ASAP
3.	Equip the labs (2018)	JO Partners	ASAP
4.	Deliver new and revised outline template	GJU	Sep 15, 2018
5.	Deliver PPT Template for teaching material	GJU	Sep 15, 2018
6.	Send available courses teaching material	EU partners	Sep 15, 2018
7.	Deliver the teaching material by the assigned JO/SY leader to prepare and submit final teaching material	JO Partners SY Partners	Nov 1, 2018



8.	Translate teaching material to Arabic	SY Partners	Dec 31, 2018
9.	Review the syllabus and teaching material	GJU	Dec, 2018
10.	Start piloting phase next semester	JO Partners SY Partners	Sep, 2018
11.	Apply Quality and impact surveys for piloting phase	JO Partners SY Partners	(Pre and Post semester)
12.	Evaluation questionnaires will be prepared and distributed to students during the piloting phase	JO Partners SY Partners	October 2018 till August 2019
13.	Analyses and Evaluation of the questionnaires	JO Partners SY Partners	Jan 2019

Course leaders and committees

Clusters	Course Title	EU Committee	JO, SY Committee	Responsible university to submit final teaching material
Cluster 1	Water Resources Engineering including non-conventional water recourses	Prof. Joachim Fettig (HS-OWL) Dr. Paulo Baptista (P&B)	Prof. Adnan Ghata (ABU) Prof. Abd-alnasser Alaaraj (ABU) Prof. Omer Maaitah (MUTAH) Dr. Mo'ayyad Shawaqfah (AABU)	Dr. Mo'ayyad Shawaqfah (AABU) Arabic version: Prof. Adnan Ghata (ABU)
Cluster 2	Water and Wastewater Treatment including Bio-Techniques for Waste Water Treatment	Prof. Martin Oldenburg (HS-OWL)	Prof. Adnan Ghata (ABU) Prof. Fahmi Abu Al-Rub (JUST) Prof. Juliet Saloum(TU) Prof. Ahmad Abu-Yaghi (UJ) Dr. Muna Hindiyeh (GJU) Dr. Mo'ayyad Shawaqfah (AABU)	Dr. Mo'ayyad Shawaqfah (AABU) Arabic version: Prof. Adnan Ghata (ABU)
Cluster 3	Design of Sustainable Buildings including Energy efficient building services	Prof. Wolfgang Streicher (UIBK)	Dr. Loui Dabbour (ZUJ) Dr. Hamzeh Ali (ABU)	Dr. Loui Dabbour (ZUJ) Arabic version: Prof. Adnan Ghata (ABU)

Cluster 4	Air Pollution and Air Quality Management	Prof. Klaus Maßmeyer (HS-OWL)	Dr. Mo'ayyad Shawaqfah (AABU) Prof. Khalaf Alabdullah (AU) Prof. Adnan Ghata (ABU) Prof. Ahmed Al-Mahmoud (ABU) Prof. Mohammad Hamdan (UJ) Prof. Ahmad Abu-Yaghi (UJ)	TU Arabic version: TU
Cluster 5	Environmental engineering and sustainable development	Prof. Martin Kaltschmitt (TUHH)	Prof. Fahmi Abu Al-Rub (JUST) Prof. Moussa Al-Samara (TU) Prof. Ahmad Abu-Yaghi (UJ) Dr. Muna Hindiyeh (GJU) Dr. Mo'ayyad Shawaqfah (AABU)	Prof. Moussa Al-Samara (TU) Arabic version: Prof. Moussa Al-Samara (TU)
Cluster 6.a	Introduction to Environment and Climate Change	Prof. Martin Kaltschmitt (TUHH) Dr. Eduardo Luís Cardoso (UCP) Prof. Klaus Maßmeyer (HS-OWL)	Prof. Moussa Al-Samara (TU) Dr. Mo'ayyad Shawaqfah (AABU) Dr. Saeb Khresat (JUST) Dr. Muna Hindiyeh (GJU)	Dr. Eduardo Luís Cardoso (UCP) Dr. Mo'ayyad Shawaqfah (AABU) Arabic version: Prof. Moussa Al-Samara (TU)
Cluster 6.c	6.c Environmental Monitoring Systems (New Course)	Dr. Eduardo Luís Cardoso (UCP) Prof. Burkhard Wrenger (HS-OWL) Prof. Klaus Maßmeyer (HS-OWL)	Prof. Adnan Ghata (ABU) Prof. Ahmed Al-Mahmoud (ABU) Prof. Khalaf Alabdullah (AU) Prof. Moussa Al-Samara (TU) Prof. Ahmad Abu-Yaghi (UJ) Dr. Muna Hindiyeh (GJU)	AU Arabic version: AU
Cluster 7	Energy Resources and Engineering and Energy conversion Technologies	Prof. Martin Kaltschmitt (TUHH) Prof. Wolfgang Streicher (UIBK)	Prof. Mohammad Hamdan (UJ) Eng. Razan Al Rhia (TU) Dr. Loui Dabbour (ZUJ) Dr. Zayed Al-Hamamre (UJ)	Prof. Mohammad Hamdan (UJ) Arabic version: Prof. Moussa Al-Samara (TU)
Cluster 8	Design of Renewable Energy Systems	Prof. Martin Kaltschmitt (TUHH) Prof. Wolfgang Streicher (UIBK) Prof. Salman Ajib (HS-OWL) Dr. Eduardo Luís Cardoso (UCP)	Prof. Suhil Kiwan (JUST) Prof. Ahmed Al-Salaymeh (UJ) Prof. Mohammad Smairan (AABU) Prof. Chehadeh Moussa (ABU) Prof. Shoaib Mahmoud (TU)	Prof. Suhil Kiwan (JUST) Arabic version: Prof. Chehadeh Moussa (ABU)



Cluster 9	Heating Ventilating and Air Conditioning Systems including solar energy driven system	Prof. Wolfgang Streicher (UIBK) Prof. Salman Ajib (HS-OWL)	Dr. Mohammad Majali (MUTAH) Dr. Osama Ayadi (UJ) Eng. Eman Abdelhafez (ZUJ) Prof. Suhil Kiwan (JUST) Dr. Mohammad Al-Rbai (UJ)	Dr. Osama Ayadi (UJ) Arabic version: Prof. Moussa Al-Samara (TU)
Cluster 10	Power and Refrigeration Cycles	Prof. Salman Ajib (HS-OWL) Prof. Wolfgang Streicher (UIBK)	Prof. Mohammad Hamdan (UJ) Dr. Mohammad Majali (MUTAH) Prof. Suhil Kiwan (JUST) Dr. Osama Ayadi (UJ)	Eng. Eman Abdelhafez (ZUJ) Arabic version: AU
Cluster 11	Modelling and simulation of power plant cycles (new)	Prof. Salman Ajib (HS-OWL)	Prof. Suhil Kiwan (JUST) Dr. Mohammad Majali (MUTAH) Eng. Scandar Hadad (TU)	Dr. Mohammad Majali (MUTAH) Arabic version: AU
Cluster 12	Waste Resource Management including Solid Waste Management	Prof. Martin Kaltschmitt (TUHH)	Dr. Mo'ayyad Shawaqfah (AABU) Dr. Rasin Zakieh (ABU) Dr. Muna Hindiyeh (GJU) Dr. Loui Dabbour (ZUJ) Dr. Zayed Al-Hamamre (UJ) Dr. Mohammad Al-Rbai	Dr. Rasin Zakieh (ABU) Arabic version: ABU



Day 2
Tuesday, September 4, 2018

Session (4)
Chaired by Prof. Wolfgang Streicher (UIBK)

WP4: Development of Online Content and Competencies

Title	Major Activities	Coordination			Estimated Start\END Date	
		Coordinator	Co-Coordinator	Other partners involved		
WP4: Development of Online Content and Competencies	Task 4.1: Development of e-Learning Environment.	UCP	JUST, AU	All	1/1/2018	1.12.2017 To 1/4/2018
	Task 4.2: Adaptation of e-learning Courses Content into curricula				1/4/2018	
	Task 4.3: Personalization of e-learning.				1/4/2018	

Dr. Eduardo Cardoso, UCP, presented the tasks and activities of this work package and the action plan for the implementation.

The two e-learning courses were selected to be **Course#6**: Introduction to Environment and Climate Change (**New course**) and **Course#8**: Design of Renewable Energy Systems.

Moodle website was established and linked to the project official website.

The partners agreed on the following:

No.	Task	Responsibility	Due Date
1.	Prepare and upload the courses material on portal	JO Partners SY Partners	Nov 1, 2018
2.	Apply quality tools	JO Partners SY Partners	Nov 1, 2018
3.	Piloting phase	JO Partners SY Partners	Sep, 2018

WP6: Monitoring and Evaluation

Prof. Ala'aldeen Al-Halhouli, GJU, presented the tasks and activities of this work package and the

Title	Major Activities	Coordination			Estimated Start\END Date	
		Coordinator	Co-Coordinator	Other partners involved		
WP6: Monitoring and Evaluation	Task 6.1: Quality Committee	GJU	TUHH	All	1/2/2017	1.11.2016 To 1/10/2019
	Task 6.2: External Evaluation				1/8/2019	
	Task 6.3: Monitoring and Evaluation Plan				1/9/2019	
	Task 6.4: Mid-Term Evaluation Report				1/4/2018	
	Task 6.5: Final Evaluation Report				1/9/2019	

action plan for the implementation.

The received External evaluator was appointed for the project.

The partners agreed on the following:

No.	Task	Responsibility	Due Date
1.	Prepare and distribute Evaluation surveys for the conducted training workshops	GJU	Sep, 2018
2.	Prepare and distribute Quality and impact surveys for piloting phase	GJU	Sep, 2018
3.	Provide External Evaluator with needed reports	GJU	Sep, 2018
4.	Collect Progress reports and submit them to project coordinator	ALL	Oct, 2018



Session (5)
Chaired by Prof. Salman Ajib (OWL-UAS)

WP5: Capacity Building

Title	Major Activities	Coordination			Estimated Start\END Date	
		Coordinator	Co-Coordinator	Other partners involved		
WP5: Capacity Building	Task 5.1: Development a Capacity Building Programme	TUHH	GJU, ABU	All	1/3/2018	1.1.2018 To 1/10/2018
	Task 5.2: Academic Visits to EU Partners				1/7/2018	
	Task 5.3: Students Visits to EU Partners				1/7/2018	
	Task 5.4: Training Workshops in environment in Jordan and Syria				1/10/2018	

Mr. Marvin Scherzinger (TUHH), presented the tasks and activities of this work package and the action plan for the implementation.

The capacity-building plan was elaborated, and the selection criteria was prepared. Also; the proposed agenda for different workshops were presented and discussed.

The partners agreed on the following tasks:

No.	Task	Responsibility	Due Date
1.	Conduct training workshop in University of Applied Sciences Ostwestfalen-Lippe	HS-OWL	September 10-15, 2018
2.	Conduct training workshop in Catholic University of Portugal	UCP	September 17-23, 2018
3.	Collect and Provide the teaching material	TUHH	Sep, 2018
4.	Conduct local training workshops in Jordan	All	Dec 16-22, 2018
5.	Distribute evaluation surveys among participants	JO Partners SY Partners	During workshops



6.	Conduct training workshops in Europe	All	2019
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WP1: Networking

Title	Major Activities	Coordination			Estimated Start\END Date
		Coordinator	Co-Coordinator	Other partners involved	
WP1: Networking	Task 1.1 : Elaboration of Agreement, Members List and Statute	JUST	P&B	All	15/10/2016 To 14/10/2019

Prof. Fahmi Abu Al-Rub (JUST) presented the status and activities of this work package and the action plan for the implementation.

The partners agreed on the following:

No.	Task	Responsibility	Due Date
1.	The partnership should work to include more members especially from Jordan and Syria. Benefits for the members for joining the network should be emphasized. The Target 300	JO Partners SY Partners	Over project
2.	Each partner country should organize at least two more national dissemination workshops and invite stakeholders who are members of the network to attend these workshops	JO Partners SY Partners	Dec, 2018
3.	Each partner university should organize at least one info and dissemination day and invite members to attend these activities	JO Partners SY Partners	Dec, 2018

WP7: Dissemination and Sustainability

Title	Major Activities	Coordination			Estimated Start\END Date
		Coordinator	Co-Coordinator	Other partners involved	
WP7: Dissemination and Sustainability	Task 7.1: Communication Plan to Disseminate Activities	ABU	ZUJ, P&B	All	1/3/2017 To 1/10/2019



	Task 7.2: Info-Days "Environments and Climate Change"				1/6/2018	
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Dr. Adnan Ghata, ABU, presented the prepared dissemination plan, tasks and activities of this work package and the action plan for the implementation. The partners agreed on the following:

No.	Task	Responsibility	Due Date
	Third Next issue of Newsletter	ZUJ	Sep, 2018
1.	Next issue of Newsletter	ZUJ, UCP	Oct 15, 2018
2.	Conduct Info-days (open door days-Environment and Climate Change) in each partner university for faculty member and students	JO SY	Once yearly
3.	Circulate the news letter to the mailing lists	JO SY EU	Over project life
4.	Info days in Partner universities about the project and its outputs during project life	JO Partners SY Partners	Once yearly

Session (6)
Chaired by Prof. Ahmed Al-Salaymeh

WP8: Management

Title	Major Activities	Coordination			Estimated Start\END Date	
		Coordinator	Co-Coordinator	Other partners involved		
WP8: Management	Task 8.1: Scientific committee	UJ	-	All	1/2/2017	15.10.2016 To 14/10/2019
	Task 8.2: Steering Committee				1/2/2017	



	Task 8.3: Operational management				14/10/2019	
	Task 8.4: EGREEN Website				1/4/2017	

Prof. Ahmed Al-Salaymeh, General Manager of Egreen Project, presented the evaluation report of the project. The partners were encouraged to take the recommendation and apply them.

The financial management guides were presented.

The action plan for the management is as follow:

No.	Task	Responsibility	Due Date
1.	Sixth Steering committee meeting will be conducted in Amman, Jordan	UJ	Dec 18-19, 2018