



**ERASMUS+ PROGRAMME**  
**Project Number: 573927-EPP-1-2016-1-JO-EPPKA2-CBHE-JP**

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

**Minutes of the Third Local Meeting (3)**

**The University of Jordan**

**Amman-Jordan**

**May 31, 2017**



### EGREEN Third Local Meeting (3)

May 31, 2017

Venue: School of Engineering

**Participants list:**

No.	Participant Name	Position
<b>The University of Jordan (UJ)</b>		
1.	Prof. Ahmed Al-Salaymeh	EGREEN Project Coordinator
2.	Prof. Mohammad Hamdan	Professor at Mechanical Engineering Department
3.	Dr. Osama Ayadi	Assistant Professor at Mechanical Engineering Department
4.	Eng. Leena Marashdeh	Research Assistant at School of Engineering
5.	Ms. Hanan Hasan	Research Assistant at School of Engineering
<b>Al-Zaytoonah University of Jordan (ZUJ)</b>		
6.	Dr. Loai Dabbour	Vice Dean for Faculty of Engineering/ Assistant Professor at Department of Architecture
7.	Eng. Eman Abdelhafez	Dean Assistant for quality assurance at the engineering Faculty/ Lecturer in Alternative energy technology department



## Introduction

Prof. Ahmed Al-Salaymeh welcomed the participants, and elaborated about the objectives of the meeting.

The meeting was conducted to discuss **WP3: Development of Study Plan and Curricula** deeply, and to group and map the suggested courses from all universities in Jordan and Syria.

## WP3-Development of Study Plan and Curricula

Title	Major Activities	Coordination			Estimated Start\END Date	
		Coordinator	Co-Coordinator	Other partners involved		
<b>WP3: Development of Study Plan and Curricula</b>	<b>Task 3.1:</b> Workshop on Curricula Updating	HS-OWL	ZUJ, MUTAH,TU	All	1/9/2017	1.8.2017 To 1/4/2018
	<b>Task 3.2:</b> Selection of Pilot Courses and Labs				1/11/2017	
	<b>Task 3.3:</b> Detailed Design of Pilot Courses				1/2/2018	
	<b>Task 3.4:</b> Accreditation of New Curricula				1/6/2018	
	<b>Task 3.5:</b> New Curricula for environment Courses				15/9/2018	
	<b>Task 3.6:</b> Establishment of Environmental lab				15/4/2018	
	<b>Task 3.7:</b> Monitoring and Feedback Methodology and Reports				1/10/2018	

The partners discussed the action plan of the WP3, and presented the achieved progress and the deviations in the WP3. During the meeting, the courses were classified and grouped to 12 themes and a new course was suggested.



The themes include Water Resources, Water Treatment, Green building, Pollution, Environmental Engineering, Climate Change, Energy resources and Engineering, Renewable energy, HVAC, Refrigeration, Thermodynamics, and Waste Management. The grouped courses are shown in the annex.

A new course was suggested to be entitled "Introduction to Environment and Climate Change".

The status and the agreed on amendments on the tasks are as follow:

No.	Task	Responsibility	Due Date
1.	Based on the results of the conducted surveys the topics that have to be introduced in the developed and created courses will be identified.	JO Partners SY Partners	Sept, 2017
2.	Each university has to adopt at least six courses from the different six themes in addition to the new course.	JO Partners SY Partners	2018
3.	Next JO local partners meeting	JO Partners	June 7, 2017 at 2:00 PM

## Annex 1

Table (1): Themes of the courses

Water Recourses		Environmental		Energy Sources		Waste Management	
Theme	Course Name	Theme	Course Name	Theme	Course Name	Theme	Course Name
<b>1</b>	Water Resources	<b>3</b>	Green building	<b>7</b>	Energy resources and Engineering	<b>12</b>	Waste Management
<b>2</b>	Water Treatment	<b>4</b>	Pollution	<b>8</b>	Renewable energy		
		<b>5</b>	Environmental Engineering	<b>9</b>	HVAC		
		<b>6</b>	Climate Change	<b>10</b>	Refrigeration		
				<b>11</b>	Thermodynamics		

Table (2) Classified courses according to the themes

Water Recourses			Enviromental			Energy Sources			Waste Management			Others	
Theme	Course Name	University Name	Theme	Course Name	University Name	Theme	Course Name	University Name	Theme	Course Name	University Name	Course Name	University Name
1	Water Resources Engineering	AABU	3	Green architecture	ZUJ	7	Energy Conversion	ZUJ	12	Bioenergy and Waste Management	ZUJ	Sustainable manufacturing	GJU
1	Sustainable Development in Water Resources	AABU	3	Architecture and environmental control	ZUJ	7	Conventional Energy Resources	ZUJ	12	Solid Waste Management	AABU	Supply Chain Management	GJU
1	Water Resources Engineering	UJ	3	Design of Sustainable Buildings	GJU	7	Energy Conversion	UJ	12	Hazardous Waste Management	AABU	Manufacturing Processes	GJU
1	Non-conventional water recourses	MUTAH	3	Architectural Environmental Systems	GJU	7	Energy efficiency and supply	MUTAH	12	Waste Resource Management	AU	Materials and Mechanics Lab	GJU
1	Water supply	ABU	3	Sustainable Building Systems	GJU	7	Energy Resources and Engineering	AU	12	Recycling of Solid wastes and sorting and biological treatment plants	AU	Electrical Machines	GJU
2	Advanced Techniques for Drinking Water Treatment	AU	3	Introduction to Green Construction Methods	GJU	7	Introduction To Energy Technologies, Environment and Sustainability	AU	12	Recycling of Construction and Demolition Wastes	AU	Utility Planning and Design	GJU
2	Physical And Chemical Water Treatment	JUST	3	Sustainable Environments Design Studio	GJU	7	Electricity-Energy Economics-Management and Distribution	TU	12	waste management	TU		
2	Biological Wastewater	JUST	3	Built environment technology	UJ	7	Energy efficient building services	TU					

	Treatment												
2	Wastewater Treatment	UJ	3	Sustainability: Green Engineering	AABU	7	Regional Dimensions Of Energy Security	AU					
2	Water and Wastewater Treatment	AABU	3	Sustainable Planning II	GJU	8	Alternative Energy (1)	ZUJ					
2	Waste water treatment	TU	3	Energy efficient building services	ABU	8	Design of Renewable Energy Systems	AABU					
2	Wastewater engineering	ABU	4	Environmental Pollution	ZUJ	8	Geothermal Energy Technology	AABU					
2	Bio-Techniques for Waste Water Treatment	AU	4	Air Quality Management	AABU	8	Bioenergy	AABU					
			4	Air Pollution	JUST	8	Renewable energy Supply	ABU					
			4	Air and Industrial Pollution	MUTAH	8	Bioenergy	AU					
			4	Human Impacts on Environments	AU	8	Renewable Energy	JUST					
			5	Environmental Engineering	AABU	8	Design Of Renewable Energy Systems	JUST					
			5	Introduction to Environmental Engineering	AABU	8	Biofuel	JUST					
			5	Environmental Engineering	JUST	8	Renewable Energy and supply System	MUTAH					
			5	Environmental Engineering Lab.	JUST	8	Renewable energy Supply	TU					
			5	Environmental Engineering	UJ	8	Renewable energy Supply	UJ					

			5	Environmental Engineering Laboratory	MUTAH	8	Solar Energy	UJ					
			5	Environmental Systems Modeling & Management	AABU	9	Air Conditioning-1	UJ					
			5	Environmental Measurement	AABU	9	Air Conditioning-2	UJ					
			5	Environmental Awareness for Engineers	AABU	9	Heating, Ventilating and air conditioning course (HVAC)	MUTAH					
			5	Environmental Agricultural Management	JUST	9	Heating Ventilating and Air Conditioning (HVAC)	GJU					
			5	Introduction To Problems Of Natural Resources And The Environment	JUST	10	Refrigeration Systems	UJ					
			5	Environmental Analytical Chemistry	JUST	10	Refrigeration	MUTAH					
			5	Environmental Assessment	MUTAH	10	Power and Refrigeration Cycles	GJU					
			5	Environmental management and sustainable development	TU	11	Engineering Thermodynamics	JUST					
			5	Methods of environmental assessment	TU	11	Applied Thermodynamics	UJ					
			5	Environmental protection engineering	ABU	11	Internal Combustion Engines	GJU					
			5	Environmental sciences	ABU								



			5	Environment	AU								
			5	Environmental Change and Transition To A Low-Carbon Society	AU								
			5	Environment Protection Legislations	AU								
			6	Introduction To Environment and Climate Change <u>"new course"</u>	ALL Partners								
			6	Special Topic in Soil and Climate Change	MUTAH								
			6	Life cycle assessment	GJU								
			6	Meteorology and climatology	ABU								
			6	Introduction To Environment and Climate Change	AU								
			6	Climate Change, Adaptation and Mitigation	AU								