

## EGREEN Online Training Workshop Report

“Development of Environmental Engineering Courses and Injection of  
Climate Change Concept for Undergraduate Curriculum”

September 6<sup>th</sup> -11<sup>th</sup>, 2020

Organized by

The University of Jordan, Jordan

### Project co-ordinator

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## Review Table

Version	Date of Submission	Quality check		Technical check	
		Reviewer	Date	Reviewer	Date
V01					

## Contents

REVIEW TABLE .....	2
1 OVERVIEW ABOUT PARTICIPANTS AND LECTURERS.....	4
2 SUMMARY OF THE ONLINE TRAINING WORKSHOP.....	8
2.1 First day: Sunday, 6 <sup>th</sup> of September, 2020.....	8
2.2 Second day: Monday, 7 <sup>th</sup> of September, 2020.....	9
2.3 Third day: Tuesday, 8 <sup>th</sup> of September, 2020.....	10
2.4 Forth day: Wednesday, 9 <sup>th</sup> of September, 2020 .....	11
2.5 Fifth day: Thursday, 10 <sup>th</sup> of September, 2020 .....	12
2.6 Sixth day: Friday, 11th of September, 2020 .....	13
3 TRAINING MATERIAL .....	14
4 PARTICIPANT LIST .....	15
5 EVALUATION RESULTS .....	17

## 1 Overview about Participants and Lecturers

**Table 1:** Lecturers from Jordanian and Syrian Partner Universities

<b>Name of Instructor</b>	<b>Institution</b>
Prof. Ahmed A-Salaymeh	The University of Jordan
Prof. Mohamad Hamdan	The University of Jordan
Dr. Osama Ayadi	The University of Jordan
Dr. Bashar Qawasmeh	The University of Jordan
Dr. Muna Hindaiyah	German Jordanian University
Dr. Hani Muhsen	German Jordanian University
Prof. Moayyad Shawaqfah	Al Albayt University
Eng. Eman Abdelhafez	The Zaytoonah University of Jordan
Prof. Omer Maaitah	Mutah University
Prof. Suhil Kiwan	Jordan University of Science and Technology
Prof. Adnan Ghata	Al-Baath University
Dr. Nahed Farhoud	University of Aleppo
Prof. Moussa Al-Samara	Tishreen University
Eng. Marvin Scherzinger	Hamburg University of Technology
Prof. Salman Ajib	Technische Hochschule Ostwestfalen-Lippe
Dr. Eduardo Cardoso	Universidade Catolica Portuguesa
Eng. Mohannad Ashhab	AEE Committee At the University of Jordan
Eng. Ala'a Mannoun	AEE Committee At the University of Jordan
Eng. Majd Tarawneh	AEE Committee At the University of Jordan
Eng. Mahmoud Abu Wardeh	AEE Committee At the University of Jordan

**Table 2:** Agenda for the Online Training Workshop

Day 1 Sunday 06.09.2020		
Time	Title of the lecture	Lecturer
16:00-17:00	Welcome and overview about EGREEN project Presentation	<b>Prof. Ahmed Al-Salaymeh</b> The University of Jordan
17:00-18:00	The role of some European Union projects in Tishreen University in achieving the goals of sustainable development.	<b>Prof. Moussa Al Samara</b> Tishreen University
<b>18:00-18:15</b>	<b>Break</b>	
18:15-19:15	Energy efficiency in building	<b>Dr. Osama Ayadi</b> The University of Jordan
19:15-20:15	MBR technology for wastewater treatment from oil refinery	<b>Prof. Adnan Ghata</b> Al-Baath University
Day 2 Monday 07.09.2020		
Time	Title of the lecture	Lecturer
16:00-17:00	"Biogas for energy provision"	<b>Prof. Martin Kaltschmitt</b> Hamburg University of Technology Hamburg
17:00-18:00	Environmental Modelling	<b>Dr. Mo'ayyad Shawaqfah</b> Al Albayt University
<b>18:00-18:15</b>	<b>Break</b>	
18:15-19:15	Smart cities ecosystem	<b>Dr. Loai Dabbour and Eng. Eman Abdelhafez</b> AlZaytoonah University of Jordan
19:15-20:15	Introduction to Photovoltaic systems	<b>Dr. Osama ayadi</b> The University of Jordan
Day 3 Tuesday 08.09.2020		
Time	Title of the lecture	Lecturer

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16:00-17:00	Effect of water variation on soil in arid and semi-arid region	<b>Prof. Omer Maaitah</b> Mutah University
17:00-18:00	Treatments of Dairy wastewater using Up flow Anaerobic sludge blanket reactor (UASB)	<b>Dr.Nahed Farhoud</b> Aleppo University
<b>18:00-18:15</b>	<b>Break</b>	
18:15-19:15	Wind Energy: Site assessment and Turbine Selection	<b>Dr.Suhil kiwan</b> Jordan University of Science and Technology
19:15-20:15	Wind Energy: Site assessment and Turbine Selection	<b>Dr.Suhil kiwan</b> Jordan University of Science and Technology
<b>Day 4</b> <b>Wednesday</b> <b>09.09.2020</b>		
<b>Time</b>	<b>Title of the lecture</b>	<b>Lecturer</b>
16:00-17:00	Digital resources for sustainable development	<b>Dr. Eduardo Luís Cardoso</b> Portuguese Catholic University
17:00-18:00	Air pollution	<b>Prof. Mohammad Hamdan</b> The Univrsity of Jordan
<b>18:00-18:15</b>	<b>Break</b>	
18:15-19:15	Groundwater modelling	<b>Dr. Mo'ayyad Shawaqfah</b> Al Albayt University
19:15-20:15	Safe Drinking Water Human Right Issues: Case Study in Jordan	<b>Dr.Muna Hindiyeh</b> German Jordanian University
<b>Day 5</b> <b>Thursday</b> <b>10.09.2020</b>		
<b>Time</b>	<b>Title of the lecture</b>	<b>Lecturer</b>
16:00-17:00	Energy Conversion Technology in Renewable Energy System based on Electrical Machine.	<b>Dr. Hani Muhsen</b> German Jordanian University
17:00-18:00	Thermal Comfort	<b>Dr.Bashar Qawasmeh</b> The University of Jordan
<b>18:00-18:15</b>	<b>Break</b>	

18:15-19:15	Solar Cooling Systems	<b>Prof. Salman Ajib</b> Hoexter University
19:15-20:15	Renewable Energy Systems	<b>Prof. Ahmed Al-Salaymeh</b> The University of Jordan
<b>Day 6</b> <b>Friday</b> <b>11.09.2020</b>		
<b>Time</b>	<b>Title of the lecture</b>	<b>Lecturer</b>
16:00-17:00	The benefits of being part of an international society	<b>Eng. Mohannad Ashhab</b> AEE Committee at University of Jordan
17:00-18:00	Job tools in the environmental field	<b>Eng. Ala'a Mannoun</b> AEE Committee at University of Jordan
<b>18:00-18:15</b>	<b>Break</b>	
18:15-19:15	Introduction to Green buildings	<b>Eng. Majd Tarawneh</b> AEE Committee at University of Jordan
19:15-20:15	Introduction to Energy Storage	<b>Eng. Subhi All-Saif</b> AEE Committee at University of Jordan
<b>20:15-20:45</b>	<b>Closing Presentation</b>	<b>Prof. Ahmed Al-Salaymeh and</b> <b>Prof. Moussa Al Samara</b>

## 2 Summary of the Online Training Workshop

### 2.1 First day: Sunday, 6<sup>th</sup> of September, 2020

On Sunday, 6th of September, 2020 the Online Training Workshop started via zoom. Different lectures related to “Renewable Energy” were presented.

The Online Training Workshop started with Prof. Ahmed Al-Salaymeh to welcome all of participant and after that Prof. Moussa Al Samara started to talk about the role of some European Union projects in Tishreen University in achieving the goals of sustainable development. Then Dr. Osama Ayadi was talked about Energy efficiency in buildings. Finally Prof. Adnan Ghata closed the first day with a lecture about MBR technology for wastewater treatment from oil refinery.



Figure 2: screenshot of presentation of day 1



Figure 1: screenshot of participant of day 1



Figure 4: screenshot of participant for day 1



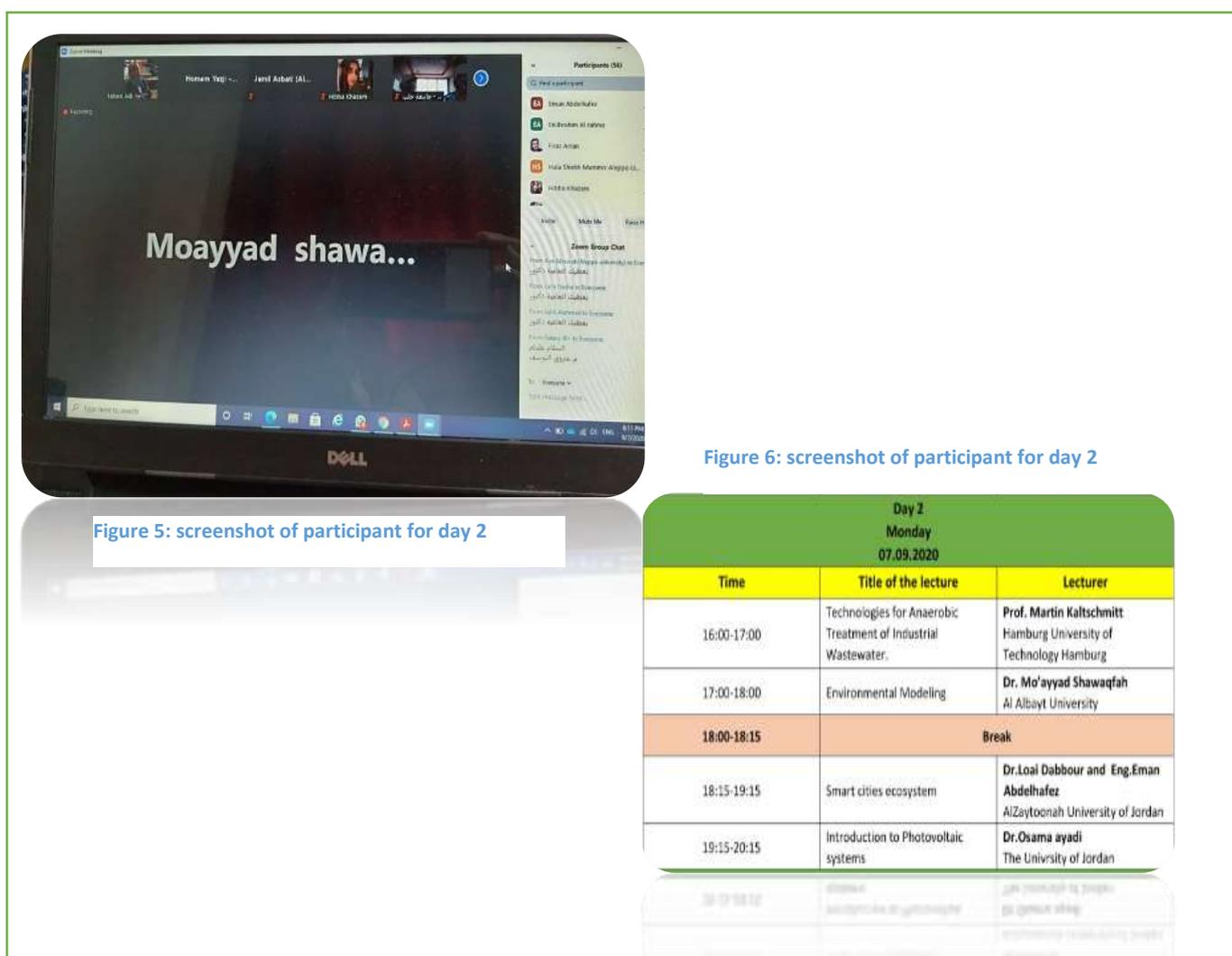
Figure 3: screenshot of participant for day 1

## 2.2 Second day: Monday, 7<sup>th</sup> of September, 2020

On Monday, 7th of September, 2020 the online training workshop continued for the second day in arrow, and in the presence of about 60 Syrian students.

It was started with Prof. Martin Kaltschmitt from Hamburg University of Technology Hamburg He was talked about “Biogas for energy provision”.

After that Dr. Mo’ayyad Shawaqfah from Al Albayt University talked about Environmental Modeling. Then Dr. Loai Dabbour and Eng. Eman Abdelhafez from AlZaytoonah University of Jordan were talked about Smart cities ecosystem. The last lecture was with Dr. Osama ayadi from The University of Jordan and it was about Environmental Modeling.



### 2.3 Third day: Tuesday, 8<sup>th</sup> of September, 2020

On Tuesday, 8th of September, 2020 the online training workshop continued for the third day in arrow, and in the presence of about 70 Syrian students.

The first lecture given by Prof. Omer Maaitah from Mutah University and it was about Effect of water variation on soil in arid and semi-arid region.

After that Dr. Nahed Farhoud from Aleppo University was started to talk about Treatments of Diary wastewater using up flow anaerobic sludge blanket reactor (UASB). The last lecture lasted for two hours and it was about Wind Energy: Site assessment and Turbine Selection, given by Dr. Suhil kiwan from Jordan University of Science and Technology.

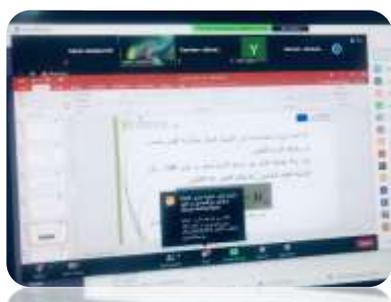


Figure 5: screenshot of presentation of day 3



Figure 6: screenshot of participant for day 3



Figure 8: screenshot of agenda for day 3

Day 3 Tuesday 08.09.2020		
Time	Title of the lecture	Lecturer
10:00-11:00	Effect of water variation on soil in arid and semi arid region	Prof. Omer Maaitah Mutah University
11:00-12:00	Treatments of Dairy wastewater using up flow anaerobic sludge blanket reactor (UASB)	Dr. Nahed Farhoud Aleppo University
<b>Break</b>		
12:15-13:15	Wind Energy: Site assessment and Turbine Selection	Dr. Suhil Kiwan Jordan University of Science and Technology
13:15-14:15	Wind Energy: Site assessment and Turbine Selection	Dr. Suhil Kiwan Jordan University of Science and Technology

Figure 7: screenshot of presentation of day 3

## 2.4 Forth day: Wednesday, 9<sup>th</sup> of September, 2020

On Wednesday, 9th of September, 2020. The online training workshop continued for the fourth day in arrow, and in the presence of about 60 Syrian students.

The first lecture given by Dr. Eduardo Luís Cardoso from Portuguese Catholic University and it was about Digital resources for sustainable development. After that Prof. Mohammad Hamdan from The University of Jordan was started to talk about Air pollution. After that Dr. Mo'ayyad Shawaqfah from Al Albayt University was started to talk about Groundwater modeling.

The last lecture was with Dr.Muna Hindiyeh from German Jordanian University and it was about Safe Drinking Water Human Right, Issues: Case Study in Jordan.



Figure 11: screenshot of presentation of day 4

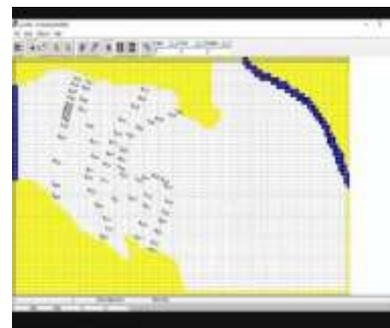


Figure 12: screenshot of presentation of day 4



Figure 10: screenshot of participant for day 4

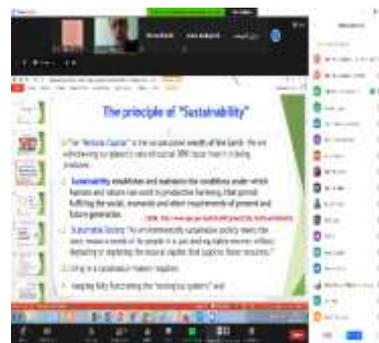


Figure 9: screenshot of presentation of day 4

## 2.5 Fifth day: Thursday, 10<sup>th</sup> of September, 2020

On Thursday, 10th of September, the online training workshop continued for the fifth day in a row, and in the presence of about 70 Syrian students.

The first lecture given by Dr. Hani Muhsen from German Jordanian University and it was about Energy Conversion Technology in Renewable Energy System based on Electrical Machine. After that Dr. Bashar Qawasmeh from The University of Jordan given a lecture about Thermal Comfort. After that Prof. Salman Ajib from Hoexter University was started to talk about Solar Cooling Systems.

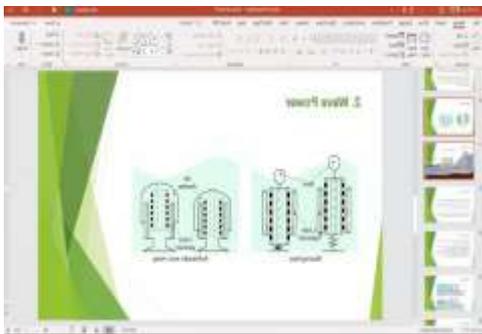


Figure 14: screenshot of presentation for day 5



Figure 13: screenshot of presentation of day 5



Figure 16: screenshot of participant of day 5



Figure 15: screenshot of participant of day 5

## 2.6 Sixth day: Friday, 11th of September, 2020

On Friday, 11 of September, 2020, was the last day of the online workshop, AEE students from the University of Jordan were presented 4 lecture on different topics, after that Prof.Salaymeh and Prof. Samara were closed the online training workshop.

The first lecture given by Eng. Mohannad Ashhab from AEE Committee at University of Jordan and it was about the benefits of being part of an international society. After that Eng. Ala'a Mannoun from AEE Committee at University of Jordan was started to talk about Job tools in the environmental field, then Eng. Majd Tarawneh from AEE Committee at University of Jordan was started to talk about Introduction to Green buildings. The last lecture given by Eng. Subhi All-Saif from AEE Committee at University of Jordan and it was about Introduction to Energy Storage. Finally Prof. Ahmed Al-Salaymeh and Prof. Moussa Al Samara closed the last day of online training workshop.

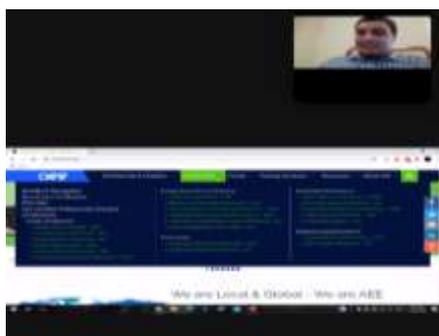


Figure 17:screenshot of the presentation of day 6



Figure 18: screenshot of participant for day 6



Figure 20: screenshot of the presentation of day 6



Figure 19: screenshot of the presentation of day 6

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### 3 Training Material

All presentations given at the Online Training Workshop have been collected and are available via following links:

#	Date	Link of Recording	Passcode
Day 1	Sunday 06.09.2020	Error happened during record So there is no recording for this day (Sorry for that )	
Day 2	Monday 07.09.2020	<a href="https://zoom.us/rec/share/tYIWsiMy0ZBxkHLAPHbvwhKRAT9NM2_LoPCPCNKac5Z_jZEwe2iiAJZ9yp_IsONHm.T4QPMZy42ASYYS6G">https://zoom.us/rec/share/tYIWsiMy0ZBxkHLAPHbvwhKRAT9NM2_LoPCPCNKac5Z_jZEwe2iiAJZ9yp_IsONHm.T4QPMZy42ASYYS6G</a>	+Nc+?2xs
Day 3	Tuesday 08.09.2020	<a href="https://zoom.us/rec/share/fD_SbxE2KetZJf_IxT8nlyJ1c_dAooDOY77Mg4pLGEH7VvYT_tqvJGyja_1Mz6b81.9asDhD1lw6O_pg_J">https://zoom.us/rec/share/fD_SbxE2KetZJf_IxT8nlyJ1c_dAooDOY77Mg4pLGEH7VvYT_tqvJGyja_1Mz6b81.9asDhD1lw6O_pg_J</a>	@8a1^CGv
Day 4	Wednesday 09.09.2020	<a href="https://zoom.us/rec/share/b00MdpugcjM4h_YqW76Fg6fV4dPqh_xVBHffFYSetSlGgAU3UqpLlue_PO_FNOPD8B.b7Vf_s6N37ja8-4k">https://zoom.us/rec/share/b00MdpugcjM4h_YqW76Fg6fV4dPqh_xVBHffFYSetSlGgAU3UqpLlue_PO_FNOPD8B.b7Vf_s6N37ja8-4k</a>	pjtAF0!
Day 5	Thursday 10.09.2020	<a href="https://zoom.us/rec/share/vJIF53V5hFlt2DTyVbc7x_JREd_Ira2J8Ka_OBfPA8h2tvhdoi30YO2R3_xhWz_pSe.6xDIKV6jAV-imsPS">https://zoom.us/rec/share/vJIF53V5hFlt2DTyVbc7x_JREd_Ira2J8Ka_OBfPA8h2tvhdoi30YO2R3_xhWz_pSe.6xDIKV6jAV-imsPS</a>	Uxw5.m20
		<a href="https://zoom.us/rec/share/knx_Rs2VOyH3aRxK1CpGN-HeGypyn-HmFHzirpDw06e5dqIqEH3ICP0Wioaho4w.Vgy9RqiQzQw4tIFN">https://zoom.us/rec/share/knx_Rs2VOyH3aRxK1CpGN-HeGypyn-HmFHzirpDw06e5dqIqEH3ICP0Wioaho4w.Vgy9RqiQzQw4tIFN</a>	190Y.o#%
Day 6	Friday 11.09.2020	<a href="https://zoom.us/rec/share/9ISywh7wGcY36XV5tfXvFjmlsL4NCCvAi8QJ_6K8nTRxJtaGJjIKDwSMGJkp_4lGr.jsbXSca5PxLPJBfC">https://zoom.us/rec/share/9ISywh7wGcY36XV5tfXvFjmlsL4NCCvAi8QJ_6K8nTRxJtaGJjIKDwSMGJkp_4lGr.jsbXSca5PxLPJBfC</a>	1LQ^&mPI

## 4 Participant List

All participants had to sign via zoom meeting by their names as the following table:

#	Name	#	Name
1	Abdalkarim Ghbien	89	Islam OTHMAN
2	Àbdul nasser alaaraj	90	Jamil ASBATI
3	Adnan Ghata	91	Joudy TARZI
4	Ahmad alzoubi	92	Kais EIMESH
5	Ali Ismail alkhalil	93	Kawthar kdimati
6	Aqil Abd Al-Jaleel Hajo	94	Kawther KDIMATI
7	Aya Ahmad Al Mansour	95	Khaled ALTISH
8	Aya Ibraheem Rastanawi	96	Louy SHAQRA
9	Bana alsayed suliman	97	Maan JNEID
10	Batool Aldeeb	98	Mahmoud NAHHAS
11	Carla Nezar Kassis	99	Majd Al Deen Al Balekh
12	Firas Khiry Arran	100	Mariam al dalia
13	Ghader mohamad. mahfoud	101	Marouf Moazzen
14	Hala albder	102	Maysan Sabbagh
15	Hassan	103	Minerva shikh wessi
16	kasandra darouj	104	Mohamad ALMASRI
17	kasandra darouj	105	Mohamad FARES
18	Klood Ziad Altarsha	106	Mohamad Humam Yazji
19	Klood Ziad Altarsha	107	Mohamad Ihsan Hammal
20	Laila nezha	108	Mohamad Taher NASHED
21	Lama khaled sefo	109	Mohamed ABDULKHALEK
22	Mhd Thaer Rajjoub	110	Mohamed Karam Almohamed
23	Mohamad Qusay Abo Hamad	111	Mohammad Ebrahim SHRAIEF
24	Mohamed abdukhalek	112	Mohammad HAMMAD
25	Mohamed Waheed Alowayed	113	Mohammad MARDINI
26	Mohammad Nedhal Ali	114	Mohammad Mardini
27	Mohammad Shukfa	115	Mohammad MASRI
28	Mohammad Shukfa	116	Mohammad Namah
29	Omar Alhussami	117	Mohammad Omar ALNAMAHA
30	rami massouh	118	Mohammad Taher Nashed
31	Raneem Issa Nassef	119	Mohammed ABDULLAH
32	Raneem Nassef	120	Mohammed ALKARAM ALMOHAMMED
33	Raneem Nassef	121	Mohammed HAMAMEH
34	Rawan Yousef	122	Mothana ALJASSEM
35	Reham Al-hamwi	123	Mouhamed Airoud BASMAJI
36	Reham mohammad Al-Hamwi	124	Muhamad Ahmad AIKhalaf
37	Ryam Zeino	125	Muhammad Adel SAWAS
38	Ryam zieno	126	Muhammad Suliman HAMMAD
39	Safaa atamaz sibai	127	Muhanad Alaani

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40	Safaa atmaz sibai	128	Muhmad Ahmad Alkalaf
41	safaa.atamaz.sibai	129	Mustafa Mohamad ALSAEED
42	Salih alahmad	130	Mustafa Sawas
43	Sally khouri	131	Nermin DAOUD
44	Waad Rabahia	132	Nour Attmeh
45	waheed alowayed	133	Nour Qatmeh
46	Yara salameh	134	Omar Alhaji
47	Zakaria amer	135	Omar HAMAMA
48	Islaam Othman	136	Omar HORAN
49	Sabaa ALDROUBI	137	Omar Moustafa ALHAJI
50	Sana MNAJED	138	Omran DABOOL
51	Abd Ulrazzak Khalilo	139	Radwan alahmh
52	Abdallah SAKKA	140	Rama DAMLKHI
53	Abdulkarem ALYOUSFI	141	Rama HAJ KHALAF
54	Abdullah SHARAF EDDIN	142	Rand HAMZE
55	Abdulrazzak KHALILO	143	Randa NAJJAR
56	Abeer ABDULWAHED	144	Rasha Allam
57	Abeer nashwan abdulwahed	145	Ratiba WAEZ
58	Adnan ALMASRI	146	Rawan BRIMO
59	Ahmad ABDULJABAR	147	Samer ISTANBULY
60	Ahmad Alessa	148	Sana mnajed
61	Ahmad AQJEH	149	Shaman ALWAWI
62	Ahmad HAMMAMI	150	Sheyam OLABI
63	Ahmad KOBO	151	Shrouk ALYOUSEF
64	Ahmad Zaher Albitar	152	Taghreed Abo Al Oioon
65	Ahmed JDEIA	153	Taha ALJWALA
66	Ahmed Jdiea	154	Turki ALALYAN
67	Ali ALMUHAMMAD	155	Yara Maarouf
68	Amjad DAHER	156	Yara MAROUF
69	Ammar HIJAZI	157	Yasmine ABD ALJLIL
70	Ammar Khalilo	158	Yazan OJAILY
71	Anas MOUSA	159	zahra Alhsen
72	Aya Albour Mohammed Hadi	160	Zoher ARNB
73	Aya Alnour Mohammed Hadi	161	Wael Edrees
74	Aya Alzainab	162	Ali Thabet Kassab
75	Aya Maaz	163	Amani Mohammad Yaser Alhamad
76	Bashir ZALKHY	164	Ammar Mahmod AlFattamah
77	Bayan Abd Alraheem	165	Ayham ghandour
78	Douaa khayat	166	Bassem Mansour
79	Ebrahim ALRAHMO	167	Bushra Hasan
80	Ebrahim ZEATER	168	Ghiwa neemeh
81	Eng. Mahmoud NAHHAS	169	Habib Daaboul
82	Esraa SHEIKH SALIM	170	Hibbalah mustafa khazem
83	Fayez MOUSA	171	Karam Haddad

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84	Hala Shiekh Mummo	172	Kholoud Kassab
85	Hammod Hason ALMOFADE	173	Mahmoud Kamel
86	Hussein RAI	174	Mirna Ali
87	ibrahim al rahmo	175	Raneem Abboud
88	Ibrahim shraif		

## 5 Evaluation Results

An online evaluation survey was filled by the participants of the Train-of-Student online workshop. However, the survey results were collected by The University of Jordan. After analyzing the result, it is clear that, the online training workshop achieved great success with the confirmation of all the attendees, in terms of organization, scientific content and performance.

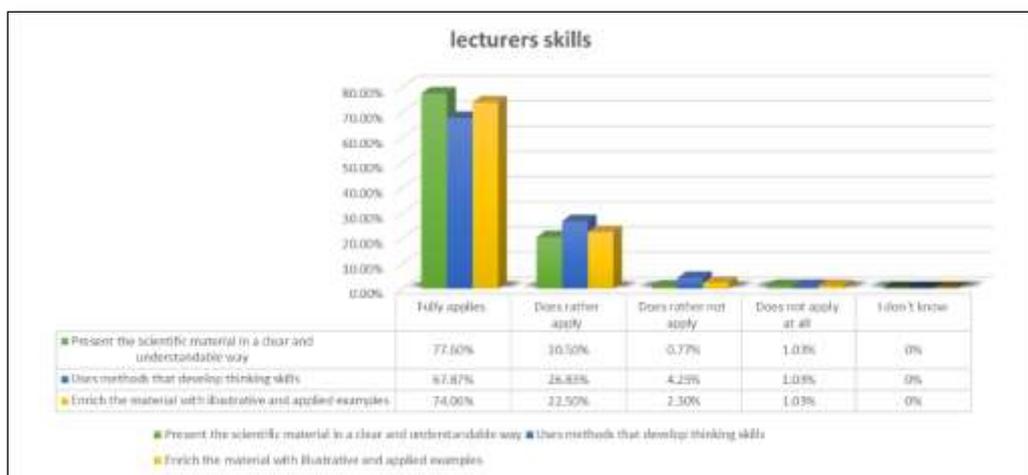


Figure 21: lecturer's skills analysis

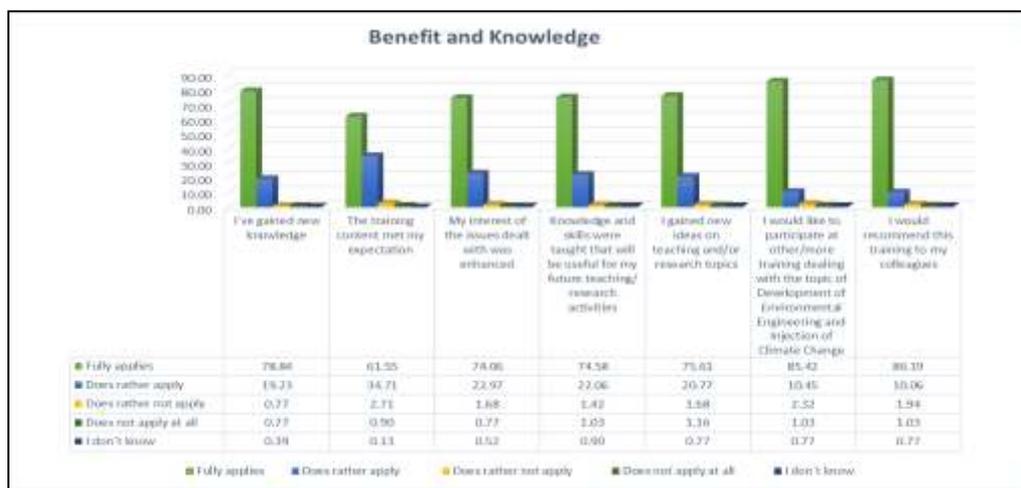


Figure 22: benefit and knowledge analysis



Figure 23: workshop quality analysis

