



2020 Newsletter



Geodesy and Geoinformatics for Sustainable
Development in Jordan

Geo4D is a Capacity Building in Higher Education project,
funded by European Union's Erasmus+ Programme

In 2020

The purpose of this newsletter is to provide detailed information about Geo4D activities, meetings and training workshops that implemented in 2020. In addition to the latest news about the progress of project, taking into account COVID-19 status in partners

Workshop on quality assurance and PBL/e-learning implementations, Jordan

As part of Geo4D working package “WP 6.1”, a workshop for Jordan partners on e Workshop on Pedagogical methods and quality assurance was held in Amman, from 1st to 8th of March, 2020.

This workshop is a follow up for the same workshop that held in Ponferrada last year. Jordan partners presented their experience in developing and implementing PBL courses. In addition to discussing further plans to develop more PBL base courses, active learning activities, e-learning and web-based learning activities.

Additional topics were discussed during this workshop, this include: Quality assurance and enhancement practices, Quality assurance of course delivery, Good practices in learning/teaching. Peer-assessment and Formative assessment.

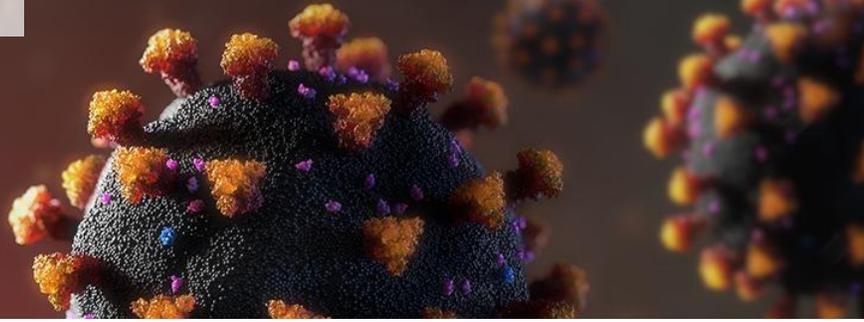
The workshop ended up with PBM meeting to arrange and schedule project activities in 2020.

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For more details, please visit
<https://www.geo4d.info>



Development of PBL, Active Learning and Web based learning activities.

Based on Ponferrada 2019 and Amman 2020 workshops on Pedagogical methods and quality assurance, PBL courses were developed and implemented by Jordan Partners Universities these include:

- 1) Six PBL scenarios by Yarmouk University (YU); for the courses Remote sensing, GIS, Geospatial Data Acquisition, Surveying and GIS Applications.
- 2) Four PBL scenarios by Hashemite University (HU) for the courses: GIS Applications for Land Management, Hyper-Spectral and 3D Remote Sensing, Geospatial Data Analysis and Risk Assessment of Natural Hazards.
- 3) One PBL scenario by Balqa Applied University (BAU) for the course Satellite Positioning and Applications.

In addition, the following table summarizes number of Active Learning and Web Based Learning activities in addition to number of QA analysis performed by each Jordan partner:

	Active Learning	Web Based	QA
YU	3	4	11
HU	4	4	8
BAU	1	41	10

Furthermore, EU and Jordan Universities staff together develop a common questionnaire to be used in course evaluation by students:

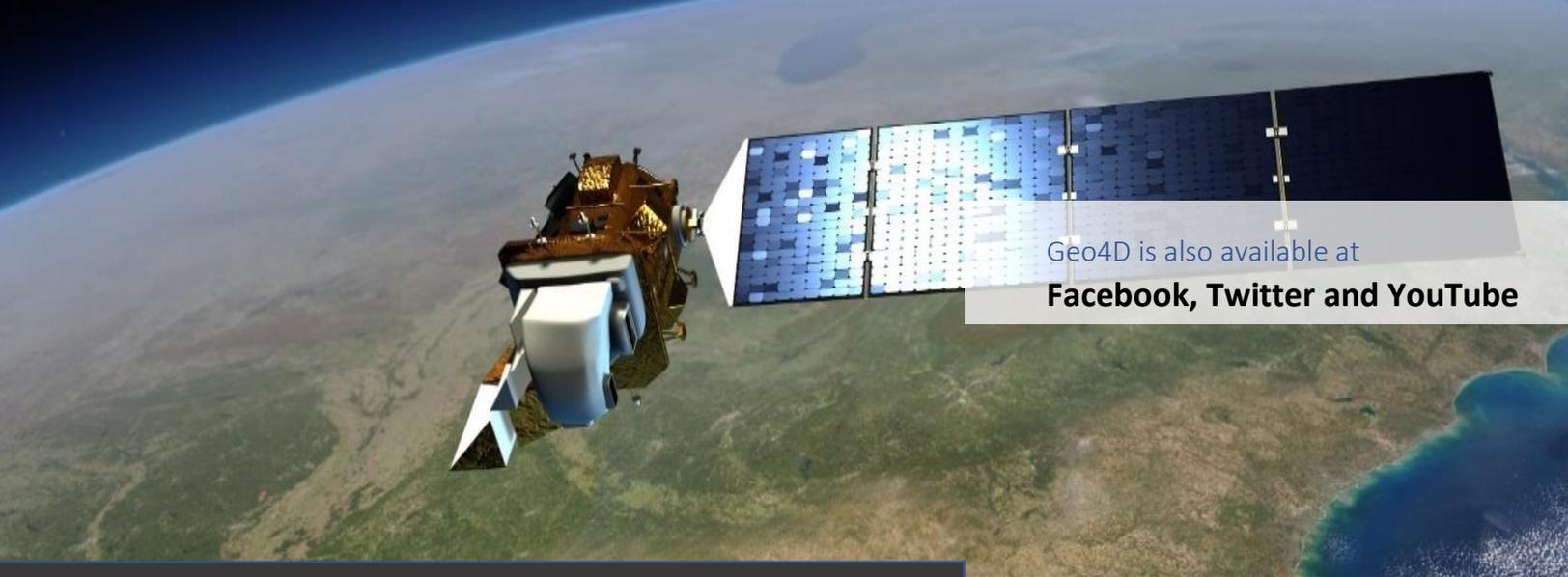
- Jordan Universities staff translate the common questionnaire developed at the QA workshop to Arabic language
- At the end of spring semester 2020, each course are evaluated by students using the common questionnaire
- Questionnaire answers are collected and analyzed
- Each Jordanian university compiled a report after analyzing the questionnaire, including problems discovered and recommended action

Common Questionnaire

Course _____ Program _____

Please rate the following on a scale of 5 (strongly agree) to 1 (strongly disagree).

	strongly agree	agree	Neither agree nor disagree	disagree	strongly disagree
1. The course syllabus was explained at the beginning of the semester and it was followed.	5	4	3	2	1
2. The provided materials/ learning resources were sufficient and understandable.	5	4	3	2	1
3. The adopted teaching methods and tools helped students learn and promote active learning.	5	4	3	2	1
4. Your background knowledge is sufficient for this course.	5	4	3	2	1
5. The time required to complete the requested tasks/assignments/tutorials is too high in relation to the number of the course credits.	5	4	3	2	1
6. Assessment and evaluation criteria were clearly identified at the beginning of the course and were followed.	5	4	3	2	1
7. The evaluation activities (exams, assignments, etc.) conform with the course contents.	5	4	3	2	1
What did you like the most in the course?					
What are your suggestions to improve this course?					



Geo4D is also available at
Facebook, Twitter and YouTube

Development of 12 teaching materials.

- Developing teaching materials is an important component of Geo4D project. 12 Teaching materials were developed by Jordan partners, and reviewed by EU partners. These are shown in the next table:

Uni.	Course name	Author	No. of lessons
BAU	Advanced Photogrammetry and Remote Sensing	Nawras Shatnawi	9
	Global Navigation Satellite Systems and Reference System	Omar Al-Bayari	13
	Image classification using PCI Geomatica	Nawras Shatnawi	7
	Applied Mathematics	Bassam Saleh	12
YU	Geospatial Data Acquisition	Muheeb Awawdeh	8
	Geodatabase Management	Rana Jawarneh	9
	Remote Sensing and Photogrammetry	Khaled Hazaymeh Ali ALmegbile	12
	Fundamentals of Geospatial data analysis (Text Book)	Muheeb Awawdeh Rana Jawarneh Khaled Hazaymeh	7 Chapters
HU	Research and Professional Development	Salman Al-Kofahi	6
	Data Mining	Mohd Qinna	9
	HyperSpectral and 3D Remote Sensing	Mohd Sawalha	5
	Risk Assessment of Natural Hazards	Nezar Hammouri	5

Lifelong Learning Activities

- Lifelong learning (LLL) courses are designed to help geodesy/GIS working professionals to upgrade their knowledge e.g. in new equipment and new technologies. It is also a tool for disseminating the project results to the general public outside the GEO4D project consortium. Initial plans was aiming at implementing from 6 to 9 LLL activities, however, COVID-19 pandemic had restricted these plans.
- However, YU was able to implement one LLL Workshop at Yarmouk University 13-15/09/2020. Topics covered include: Introduction to modern surveying, principles of multi-sensor integration systems, Remote Sensing Fundamentals, GIS Fundamentals.
- In spite of the COVID-19 pandemic, BAU also managed to deliver a LLL course on 3D laser scanning on October 11, 2020.



Real Estate Valuation using GIS Training Course.

- This training course was organized by external sub-contractor "SCALE Real Estate Services". 9 Jordanian staff from Al-Balqa Applied University Hashemite University and Yarmouk University attended the training course in Amman on July 22-23, 2020.
- Training course consisted of both lectures on real estate market in Jordan and real estate valuation, and also computer-based practice application of GIS for real estate valuation



Joint NAB-PMB Meeting

- A Joint NAB-PMB Meeting was held on Wednesday, September 23, 2020, 10.00 – 12.00 am (Central European Summer Time) with Participants from Members of the National Advisory Board (NAB), and Members of the Project Management Board (PMB).
- The meeting was held remotely using Zoom meeting platform. Main topics that discussed were: Progress reports by Jordanian partner universities, Comments by NAB members, Discussions on future cooperation with Jordanian partner universities At the joint meeting, Jordanian university partners presented project activities carried out in the last one and a half year.
- NAB members commented on the work. Mr Mazen Badawan suggested that BAU and Department of Lands and Survey cooperate on 3D cadaster in the future. This suggestion has been accepted by GEO4D partners. In addition, it was suggested to develop future lifelong learning courses for working professionals as cooperation between Jordanian universities and geodesy/GIS stakeholders. A concluding suggestion by Geo4D project coordinator for the Jordanian partners to discuss possible continuation of the work of NAB and topics of corporations.

Project implementation under COVID-19 pandemic

- From March 2020, the corona pandemic has started in all GEO4D partner countries. The pandemic has not only prevented international mobilities, but also delayed various GEO4D activities such as accreditation of new master programmes, delivery of lifelong learning courses for working professionals, and the 3rd annual meeting of the Project Management Board (PMB).
- The project consortium made necessary arrangements so that project activities can be implemented in other ways than originally planned. For example, instead of one-week physical meeting in Stockholm, the PMB has had regular online meetings through the Zoom platform. So far, PMB has had 10 Zoom meetings to plan activities and evaluate project progresses.

Accreditation of Master Program at BAU

- On October, 2020, the Accreditation and Quality Assurance Commission for Higher Education Institution (HEAC), granted accreditation for the new Mater program "**Master of Geomatics Engineering**" at BAU. This is the second master among three master programs to be accredited by HEAC, where the last master program are in the pipeline, and expected to be accredited before the end of 2020.
- Upon this accreditation, the Deanship of Graduate studies at BAU opened the call for admission in the program. A total of 18 students were admitted on the first semester of academic year 2020/2021.



Geodesy and Geoinformatics for Sustainable Development in Jordan



Final Conference

13 October 2020

Yarmouk University
Irbid-Jordan

On October 13, 2020, the GEO4D project will have its final project conference. The conference will be organized both as physical meeting at Yarmouk University and digitally via the Zoom online meeting platform. Staff and students of the GEO4D partner organizations, members of the National Advisory Board, staff of the National Erasmus+ Office in Jordan, and other interested stakeholders will be invited to the conference. At the conference, the GEO4D project teams will report the project implementations and achieved results.

The Zoom link to the conference is:

<https://kth-se.zoom.us/j/68145396210?pwd=Q2YyaGFFNzdiOHFyek1sS280Z3ZaQT09>

Venue: Applied Geoinformatics Lab, Department of Earth and Environmental Sciences, Yarmouk University, Irbid, Jordan

CONFERENCE AGENDA

10.00 – 10.15 Opening speeches

- Professor Khaled Al-Batayneh,
Dean of the Faculty of Science, Yarmouk University

10.15 – 12.15 Presentation of the GEO4D

1. Overview of the GEO4D project
Dr *Huaan Fan*, Project coordinator, KTH Royal Institute of Technology, Sweden
2. Development of new master programmes at Jordan universities
Dr *Rana Jawarneh*, Yarmouk University
3. GEO4D training activities
Professor Marco Scaioni and Maria Antonia Brovelli, Politecnico di Milano, Italy

4. New teaching and learning methods
Dr Flor Álvarez Taboada, University of Leon, Spain

Break (10 minutes)

5. PBL implementation experience at the Hashemite University
Dr Mohammad Al-Qinna, Hashemite University
6. New learning tools and teaching materials
Professor Muheeb Awawdeh, Yarmouk University
7. Course assessment by students
Dr Omar Al-Bayari, Al-Balqa Applied University
8. GEO4D project website
Professor Nezar Hammouri, Hashemite University