



**Periodical Report
18 Months of project
implementation**

**New Curricula in
Precision Agriculture
Using GIS Technologies
and Sensing Data**

IBN KHALDOUN TIARET UNIVERSITY UIK



Co-funded by the
Erasmus+ Programme
of the European Union

**Joint Project: Capacity Building in the Field
of Higher Education ERASMUS+ 2018**

By UIK Group

ACTIVITIES IMPLEMENTED THAT ARE NOT MENTIONED IN REPORT 12M (From November 2019 till May 2020)

The university has implemented the following activities (+ short description of their deliverables) according to the work plan:

WP1: Review of the current curricula for BA/MSc

Agricultural statistics and experimentation ; Plant ecophysiology , Geographics informations systems ; Geographics data bases ; Information's & communications technologies ; Bibliographic research

WP2 : Update new curricula

Remote Sensing and Application of Earth and Environment related PA ; Yield sensors for Precision Agriculture ; Basics of the Precision Agriculture ; Intensive course to leverage acceptance of the new technologies ; Soil physical properties and its measurement ; Algorithmic and data structure ; Electrical and electronic measurements ; Global Navigation Satellite System (GNSS) ; signal processing ; Artificial Intelligence , Agrometeorology ; Start-up initiatives for future farmers ; Using of SENTINEL1-2-3 imagery for agricultural field monitoring ;Optimizing computer vision algorithms and real-time implementations ; Web technology ; Application of precision agriculture for culture growth ; Geographic's data bases ; Management Marketing and Decision Making in Precision Agriculture



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WP3 Quality Control:

- Assess visibility, clarity and attractiveness of training
- Assess adequacy of access conditions with the objectives of the training
- Collection and analysis of data
- Internal review of the curricula
- Meeting with the members of the University QA Unit
- Development of quality indicators for curricula
- Curricula Evaluation
- updating of the group's work schedule

Paragraph to insert into the report:

Due to the current pandemic, several QA actions have not been carried out until now.

The group activities are limited to:

- Participation in meetings;
- Establishing of Quality indicators for courses/modules/curricula;
- Preparation for future actions.

The remaining actions will be started as soon as possible depending on the lifting of containment.

WP4 Passenso:

Within the framework of the activities of dissemination of information and presentation of the ERASMUS + Cupagis project, initiated at the University IBN KHALDOUN DE TIARET, a good number of activities were programmed and carried out during the last period

- 1- Facilitation of meetings Cupagis team / social partners: discussions and exchanges on the objectives of the program and perspectives of implementation.
- 2- Extension and sensitization for the benefit of the student community: presentation of the cupagis program for the target populations
- 3- development of a web platform on the university's website
- 4- Radio program animation, on the regional channel to sensitize potential socio-economic partners and other actors in the agricultural sector.
- 5- Information and communication day on the ERASMUS + programme, particularly the Cupagis project at the central library of the Faculty.
- 6- Creation and distribution of a Cupagis brochure on the moodle eLearning platform of the University IBN KHALDOUN DE TIARET.



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WP5 Management project:

- Meeting minute with the partners Cupagis of Tiaret each Tuesday : 26 November 2019; 10 December 2019; 7 and 21 January 2020; 4 and 25 February 2020; 10 and 24 March 2020; 7 April 2020 : development and creation of coordination programs
- Training course on 19-30 August 2019 in Technic University Berlin (Germany) : GIS, Precision Agriculture and Remote sensing
- Cupagis student questionnaire/Draft about the program ERASMUS and CUPAGIS : 25 November 2019
- Cupagis equipment/ Draft: soil sampling instruments, multi-sensors humidity, station work of measuring and the rooms equipment in SNV of university of Tiaret : 18 February 2020
- 21 st November 2019 cluster meeting on CBHE projects: University of Mostaganem
- Knick off Meeting minute with the stakeholders: DSA, INRA, ITGC, INSID, chamber agriculture of Tiaret and CRMA, 22 December 2019 : approbation of the Master of Precision agriculture
- Cupagis meeting zoom with Algerian-partners (April 2020).
- Cupagis meeting zoom with European-partners (March-2020).



New Courses development process

Course №	Title of the course	Number of ECTS	Name of the person(s) responsible for development + email	Teachers have completed trainings regarding the course (yes or no/ in EU or at home university)	Estimate the percentage of course description development	Estimate the percentage of lecture notes/ presentations development	Estimate the percentage of course work methodology development (if applicable)	Estimate the percentage of practical/ laboratory work methodology development	Estimate the percentage of content, that is planned to be delivered in English (if applicable)
01	Remote Sensing and Application of Earth and Environment related PA	08	Dr. Kaddar Bachir	no	100 %	100 %	100 %	100 %	100 %
02	Yield sensors for Precision Agriculture	03	Pr.Allaoui Tayeb	no	100 %	100 %	100 %	100 %	100 %
03	Basics of the Precision Agriculture	05	Pr. Dellal Abdelkader Pr.Oulbachir Karima	yes	100 %	100 %	100 %	100 %	50 %
04	Agricultural statistics and experimentation	04	Dr. Benaichata Lazrag	no	100 %	100 %	100 %	100 %	100 %
05	Plant ecophysiology	04	Pr. Maatoug M'hamed Dr.Maamar Benchebra	no	100 %	100 %	100 %	100 %	50 %



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07	Intensive course to leverage acceptance of the new technologies	03	Dr.Maamar Benchohra	no	100 %	100 %	100 %	100 %	100 %
08	Soil physical properties and its measurement	04	Pr.dellal Nadia	yes	100 %	100 %	100 %	100 %	70 %
09	Algorithmic and data structure.	05	Pr.Allaoui Tayeb	no	100 %	100 %	100 %	100 %	100 %
10	Electrical and electronic measurements	05	Pr.Allaoui Tayeb	no	100 %	100 %	100 %	100 %	100 %
11	Global Navigation Satellite System (GNSS)	3.5	Dr.Benaichata Lazrag	no	100 %	100 %	100 %	100 %	100 %
12	signal processing	03	Pr.Allaoui	no	100 %	100 %	100 %	100 %	100 %



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13	Artificial Intelligence	03	Dr. Si abdelhadi Hamida	no	100 %	100 %	100 %	100 %	70 %
14	Agrometeorology	04	Dr.Benaichata Lazrag	no	100 %	100 %	100 %	100 %	100 %
15	Start-up initiatives for future farmers	2.5	Dr. Maamar Benchohra	no	100 %	100 %	100 %	100 %	70 %
16	Using of SENTINEL1-2-3 imagery for agricultural field monitoring	04	Pr.Maatoug M'hamed Dr. Bouacha Med Islem	No no	100 %	100 %	100 %	100 %	100 %
17	Optimizing computer vision algorithms and real-time implementations	04	Dr. Mansouri Dou El kifl	no	100 %	100 %	100 %	100 %	100



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19	Application of precision agriculture for culture growth	04	Dr. Benaichata Lazrag	no	100 %	100 %	100 %	100 %	100 %
20	Geographics informations systems	04	Dr.Bouacha Med islem	no	100 %	100 %	100 %	100 %	100 %
21	Geographics data bases	04	Dr. Kaddar Bachir	no	100 %	100 %	100 %	100 %	100 %
22	Agricultural legislation	02	Dr.Bouacha Med islem	no	100 %	100 %	100 %	100 %	50 %
23	Bibliographic research	01	Dr.Maamar Benchohra	no	100 %	100 %	100 %	100 %	100 %
24	Management Marketing and Decision Making in Precision Agriculture	03	Dr.Maamar Benchohra	no	100 %	100 %	100 %	100 %	50 %
25	Information's & communications technologies	01	Dr.Siabelhadi Hamida	no	100 %	100 %	100 %	100 %	100 %



TEACHING MATERIALS

No	Title of the materials	Type (manuals/text books/methodological recommendations)	Short description	Estimated date of the development of the digital versions-drafts (.doc files)
1	Fundamentals of general agriculture	Text book	Brief description of the basics of the agriculture	2020-2021
2	Soil physics' properties	Text book	A review of soil physics parameters used in agriculture	2020-2021
3	Basics of Precision agriculture	Text book	Introduction to precision agriculture	2020-2021
4	Google earth engine for crop mapping	manual	A manual for using the GGE plate-forme for crop mapping and vegetation health analysis	2020-2021
5	Instrumental analysis	Text book	A practical handbook explaining the use of instrumental materials in the laboratory	2020-2021
6	Advanced commands of the industrial systems	Text book	A brief description of the industrial systems commands	2020-2021
7	Industrial regulation	Text book	Description of the industrial regulation process	2020-2021
8	Statistics with R	manual	Using the R programm for statisticals analysis	2020/2021

NB: online courses are available at <http://moodle.univ-tiaret.dz/?lang=en> with permission



QUALITY ASSURANCE OF THE NEW COURSES

QUALITY ASSURANCE – Courses						
Course No	Course title	Peer reviewers (Name, position, organization)				
All courses	Surname & Name	Area of interest	Faculty	Degree	Email	
		GHELLAB Abdelkader	electronics (System signals, sensors and image processing)	Applied Science (Electrical engineering)	Lecturer	ghabdelkader@yahoo.fr
		MIARA Djamel	Plant, botanical ecophysiology	Natural and life sciences	Lecturer	miara14130@yahoo.fr



IMPACT AND SUSTAINABILITY

DISSEMINATION EVENTS-1 (THAT ARE NOT MENTIONED IN REPORT 12M/ FROM NOVEMBER 2019 TILL MAY 2020)

No	Question	Answer
1	How many dissemination events were conducted?	Within the framework of the activities of dissemination of information and presentation of the ERASMUS + Cupagis project, initiated at the University IBN KHALDOUN DE TIARET, a number of six activities were conducted
2	How much and which new dissemination materials were produced (leaflets, brochures, flyers etc)?	http://moodle.univ-tiaret.dz/course/index.php?categoryid=1000249 Inform us published on the eLearning plate-forme of the university and available to download.
3	Report on the dissemination of the information about the project in mass media	<p>1- http://lecourrier-dalgerie.com/universite-ibn-khaldoun-de-tiaret-un-master-international-sur-lagriculture-de-precision-lannee-prochaine/</p> <p>2- https://elmaghrebelawsat.com/2020/01/08/%D8%A5%D8%AF%D8%B1%D8%A7%D8%AC-%D9%85%D8%A7%D8%B3%D8%AA%D8%B1-%D8%AF%D9%88%D9%84%D9%8A-%D8%AD%D9%88%D9%84-%D8%A7%D9%84%D8%B2%D8%B1%D8%A7%D8%B9%D8%A9-%D8%A7%D9%84%D8%AF%D9%82%D9%8A%D9%82%D8%A9-%D8%A8/</p>
4	Planned dissemination activities	<ul style="list-style-type: none"> - Study day for the new students of the university - TV interview with a regional channel “ El Bahia” - A meeting with the stakeholders for a presentation of the developed course



DISSEMINATION EVENTS-2 (THAT ARE NOT MENTIONED IN REPORT 12M/ FROM NOVEMBER 2019 TILL MAY 2020)

No	Date	Title	Target Audience (list of target groups)	Number of participants	Is there a press-release of the event (YES/NO). If YES, provide it
1	22/12/2019	Facilitation of meetings Cupagis team / social partners: discussions and exchanges on the objectives of the program and perspectives of implementation.	stockholders	05	no
2	February 2020	Extension and sensitization for the benefit of the student community: presentation of the cupagis program for the target populations	Bachelor's students	80	no
3	19 December 2019	development of a web platform on the university's website	Multiple visitors of the official university web-site	15-20 per day since the creation of the web-site	www.Cupagis.univ-tiaret.dz
4	24 February 2020	Radio program animation, on the regional channel to sensitize potential socio-economic partners and other actors in the agricultural sector.	University community	undefined	www.Cupagis.univ-tiaret.dz
5	07th January 2020	Information and communication day on the ERASMUS + program, particularly the Cupagis project at the central library of the Faculty.	Teachers , students of the university	undefined	Radio interview that will be published in the cupagis website
6	07th January 2020	Open days on the Cupagis project for new graduates 2020 (Scheduled for the end of September)	Teachers , students of the university	undefined	no
7	May 2020	creation and distribution of a Cupagis brochure on the moodle eLearning platform of the University IBN KHALDOUN DE TIARET.	Teachers , students of the university	undefined	no

NON-ACADEMIC PARTNERS (FOUND FROM NOVEMBER 2019 TILL MAY 2020)

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No	Question	Answer
1	Please, provide a list of non-academic partners and organizations outside the project, with which you maintain communication and which could be interested in hiring your graduates	<ul style="list-style-type: none"> - Directorate of agricultural services - Chamber of Agriculture - National Institute of Agronomic Research - Directorate General of Forests
2	Please, provide information regarding the planned dissemination events for the interested in the project stakeholders, non-academic partners and organizations outside the project.	<ul style="list-style-type: none"> ➔ - Study day on Cupagis (scheduled for the start of the academic year in October 2020/2021) ➔ - Program with BAHIA television and Tiaret radio on the Cupagis project
3	University – enterprise agreements	<ul style="list-style-type: none"> ➔ Scan the signed university – enterprise agreements ➔ https://cupagis.eu/index.php/cupagis-plus





Thank you for you attention!

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