

**Periodical Report
18 Months of project
implementation**



New and Innovative Courses for Precision Agriculture



NATIONAL UNIVERSITY OF UZBEKISTAN NAMED AFTER MIRZO ULUGBEK

Dr. ABDUMANAP NASIROV

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

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





PROJECT ACTIVITIES – FROM NOVEMBER 2019 TILL MAY 2020

Question

Please, name activities and short description of their deliverables your university implemented so far according to the project work plan. Please, describe activities and their results specifically for each of the Work Packages (WP1-WP5)

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

WP1.1. In total 17 curricula (5 EU and 12 UZ) have been reviewed for the following BA/MSc programs at NUU:

5311500 - Geodesy, cartography and cadastre (BA)	5A311502-Geodesy and cartography (MSc)
5311500 - Geodesy, cartography and cadastre (BA/DL)	5A313401- Geodesy and geoinformatics (MSc)
5140600 – Geography (BA)	5A141001 - Soil science (MSc)
5410100 - Agrochemistry and agrosoil science (BA)	

9 specialists have been involved for revising existing courses and they reviewed the following courses:

EU	UZ
Soil physical properties and its measurement	Geodesy (BA)
Global Navigation Satellite Systems	Geographic Information Systems (BA)
Using of SENTINEL1-2-3 imagery for agricultural field monitoring	Photogrammetry and Remote Sensing (BA)
Basics of the Precision Agriculture	GIS technology in soil science (BA)
Application of Precision Agriculture for crops growing	Soil and Agroecology (BA)
	Soil mapping (BA)
	Applied Geoinformatics (MSc)
	Data Acquisition and Data Integration (MSc)
	Innovative technologies in soil science (MSc)
	Agricultural Meteorology (MSc)
	Soil informatics and Geographic Information Systems (MSc)
	Soil cover monitoring (MSc)



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

WP1.2. Agreement on instructional strategy and guidelines for BA/MSc curricula design including the use of new Educational Technologies

It was agreed to update following modules:

Geodesy (BA)	Applied Geodesy (MSc)
Geographic Information Systems (BA)	Data Acquisition and Data Integration (MSc)
Photogrammetry and Remote Sensing (BA)	Innovative technologies in soil science (MSc)
Soil and Agroecology (BA)	Soil cover monitoring (MSc)
Applied Geoinformatics (MSc)	Agricultural Meteorology (BA /MSc)

It was agreed to develop following new modules:

10 teaching staff involved in the new courses development.

- Basics of the Precision agriculture (BA)
- Global Navigation Satellite Systems (MSc)
- Remote Sensing and Application of Earth and Environment related PA (MSc)
- Application of Precision Agriculture for crops growing (MSc)
- Yield sensors for Precision Agriculture (MSc)



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

WP2.1 Prepare a set of new core curricula and transferable modules inclusive innovative teaching/ learning facilities; develop syllabi; adopt new curricula and modules on institutional /accredit on national level

Following modules have been adopted on institutional level:

- Basics of the Precision agriculture (BA)
- Global Navigation Satellite Systems (MSc)
- Remote Sensing and Application of Earth and Environment related PA (MSc)
- Application of Precision Agriculture for crops growing (MSc)
- Yield sensors for Precision Agriculture (MSc)

WP2.2 Prepare a set of documentation for PAL and VCR; purchase the equipment incl. software; install the equipment

Documentation of PASO has been prepared. A list of equipment has been prepared. It is ready for tendering.

WP2.3 Casting criteria for participants and retraining program for academic teachers. Retrain academic teachers in new curricula using innovative teaching/ learning facilities and agreed instructional strategies

A document for selection criteria for teachers has been prepared. 3 teachers have been retrained at EU. 2 master classes were organized by project team for teachers and master students.

WP2.4 To update the current BA/MSc curricula/create updated programs in the target area according to the Bologna requirements and the new developments.

Following a new curricula has been established and new/updated modules has been included to this new curricula:

- 5311500 - Geodesy, cartography and cadastre (BA)
- 5A313401- Geodesy and geoinformatics (MSc)
- 5A141001 - Soil science (MSc)



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

WP3.1. The Quality assurance strategy/QA Plan of each PC university including internal/external Quality evaluation/reports according to QA Plan

QA Plan of NUU has been developed and approved. Quality Group has been established and 3 specialists involved in Internal Evaluation Board.

WP4.1. Project DISS& EXP /communication plan using a Set of Promotional Materials; Dissemination Events, Joint WEB based platform, “NICOPA+” Agreement

Schedule of dissemination events for 2019 and 2020 years has been developed and dissemination events have been organized based on schedule. A list of Potential employers and a list of non-academic partners and organizations have been formed.

WP5.1 Management of the project including Project management online, daily project administration and coordination

We have organized national coordination meetings between UZ partners and participated regional coordination meetings. During the meeting were discussed issues related to the management of the project and agreed on a list of equipment for laboratories. 2 internal reports (6M, 12M) prepared and submitted.



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)
1	Remote Sensing and Application of Earth and Environment	4	Ilkhomjon Abdullaev ilkhomjon.abdullaev@gmail.com Abdujalil Muminov mominov010@gmail.com Sevar Salohitdinova sevar.salohitdinova@gmail.com	Yes, in EU Yes, at home university Yes, at home university	90	80	N/A	80	50
2	Global Navigation Satellite Systems (NAVSTAR, GLONASS, GALILEO, etc.)	4	Azizjon Ruziev azizjon.ruziev84@gmail.com Erkin Mirmakhmudov erkin_mir@mail.ru	Yes, in EU Yes, at home university	90	80	N/A	80	60
3	Application of Precision Agriculture for crops growing	4	Tokhtasin Abdрахmonov soilecology@yandex.ru Mashkura Fakhrutdinova mashkura.fakhrutdinova@mail.ru	Yes, at home university Yes, at home university	70	50	N/A	50	N/A
4	Yield sensors for Precision Agriculture	4	Abdumanap Nasirov aanasirov1962@mail.ru Pavel Parchinskiy pavelphys@mail.ru	Yes, in EU Yes, at home university	80	60	N/A	60	N/A
5	Basics of the Precision agriculture – characteristics, technologies, economic efficiency, optimal use of resources	4	Bakhtiyar Kholmatjanov b.kholmatjanov@gmail.com	Yes, at home university	80	50	N/A	50	N/A



CURRICULA DESCRIPTIONS

Prepare curricula descriptions (CD) for each updated course and upload to:

<https://1drv.ms/u/s!As2qwylL4xyxiVWTn00pWgbPHIHR?e=T5bTOw>

will be uploaded until September 2020

Prepare curricula descriptions (CD) for each new course and upload to:

<https://1drv.ms/u/s!As2qwylL4xyxiVWTn00pWgbPHIHR?e=T5bTOw>

Uploaded (2/5)



TEACHING MATERIALS

According to the working plan, all target universities should develop digital versions-drafts (.doc files) of their OWN manuals/textbooks/methodological recommendations for students and teachers. Upload the digital version to: <https://1drv.ms/u/s!As2qwyIL4xyxjD53yKNjXi5C3lLv?e=ucjf20>

will be uploaded until September 2020

Design requirements: please, add to the document the Erasmus+ logo, project logo, as well as the following disclaimer: "The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein".

You can find the Erasmus+ logo in the link below:

https://eacea.ec.europa.eu/about-eacea/visual-identity-and-logos-eacea/erasmus-visual-identity-and-logos_en?fbclid=IwAR1tZxEAuGS-BvNAGlrRvoAVf_WWoyXyrRzVqgzgku-Bnj6Gpuj1koNIMuQ



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Uploaded (1/2)



TEACHING MATERIALS

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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	Geodesy	textbook	The textbook are considered the subject of geodesy and its tasks, types and methods of geodetic measurements, the devices of geodetic instruments and the production of measurements by them, the mathematical processing of measurements and the construction of plans, maps and profiles.	September 2020
2	Photogrammetry and Remote Sensing	methodological recommendations	Methodical guidance is recommended for completing interconnected laboratory tasks in the subjects "Photogrammetry and Remote Sensing of the Earth", "Geographic Information Systems" for 3rd year students.	September 2020



QUALITY ASSURANCE OF THE NEW COURSES

QUALITY ASSURANCE – Courses

Course №	Course title	Peer reviewers (Name, position, organization)
1	Basics of the Precision agriculture (BA)	1. Jabbarov Z. Head of the department Soil sciences, NUU 2. Fakhrutdinova M. Associate professor, NUU
2	Global Navigation Satellite Systems (MSc)	1. Muborakhov Kh. Associate Professor, NUU 2. Xushvaqto'v B. Head of the Department of Geodesy of the National Center for State Cadastres, Geodesy and Cartography
3	Remote Sensing and Application of Earth and Environment related PA (MSc)	1. Mirmakhmudov E. Associate Professor, NUU 2. Shukina O. Associate Professor, NUU
4	Application of Precision Agriculture for crops growing (MSc)	1. Jabbarov Z. Head of the department Soil sciences, NUU 2. Parchinskiy P. Associate professor, NUU
5	Yield sensors for Precision Agriculture (MSc)	1. Fakhrutdinova M. Associate professor, NUU 2. Abdullaev I., Associate professor, NUU



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?	4
2	How much and which new dissemination materials were produced (leaflets, brochures, flyers etc)?	<p>→ Send us prepared/published E-layouts or drafts of brochures and leaflets;</p> <p>→ Inform us about the dates of approximate printing, publishing and distribution of brochures and leaflets.</p> <p>Sep-Nov, 2020</p>
3	Report on the dissemination of the information about the project in mass media	<p>→ Send us links or scans/files of <u>publications</u> about the project in mass media: magazines, newspapers, TV, the Internet, etc., with the date of their publications.</p> <p>→ If they are not published yet, inform us when you are planning to publish them.</p> <p>Sep-Nov, 2020</p>
4	Planned dissemination activities	<p>Please, send us the plan of future dissemination activities until November 2020</p> <p>Plan of future dissemination_2020</p>



IMPACT AND SUSTAINABILITY

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

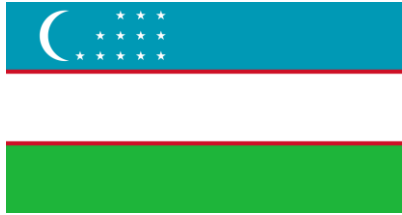
No	Date	Title	Target Audience (list of target groups)	Number of participants	Is there a press-release of the event (YES/NO). If YES, provide it
1	20.11.2019	Coordination meeting with Uzbek partner universities, TUIT, Tashkent, Uzbekistan	Teachers, PhD students	12	NO
2	27.12.2019, 20.02.2020	Department meeting for 2019/2020 teaching year	Staff of the Department "Geodesy and Geoinformatics"	11	NO
3	04.03.2020	Coordination meeting with Uzbek partner universities, TUIT, Tashkent, Uzbekistan	Teachers, PhD students	15	NO
4	02.06.2020	International GIS in Central Asia Conference – GISCA 2020. Online Conference	Representatives of the HEIs, organizations, industry, teachers, students etc.	190	NO



IMPACT AND SUSTAINABILITY

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

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	List of non-academic partners and organizations: No changes
2	Please, provide information regarding the planned dissemination events for the interested in the project stakeholders, non-academic partners and organizations outside the project.	<p>➔ Inform us about the planned date of the next event. If the event has already taken place, send us its press release;</p> <p>JOINT INTERNATIONAL CONFERENCE InterCarto. InterGIS 26. ANNUAL INTERNATIONAL SCIENTIFIC CONFERENCE ON GEOINFORMATICS – GI 2020, “Supporting sustainable development by GIST”, October 3-5, 2020, TIAME, Tashkent, Uzbekistan http://geo.amk.uni-obuda.hu/gi2020/call.htm</p> <p>Call for papers, NEO annual publication - 2020 National Erasmus+ Office is planning to publish the next publication “Erasmus+ in Uzbekistan - 2020” covering all completed and on-going Erasmus+ Capacity Building in Higher Education (CBHE), Capacity Building for Youth (CBY), International Credit Mobility (ICM) projects in Uzbekistan (www.erasmusplus.uz). http://www.erasmusplus.uz/news/Call-for-papers-NEO-annual-publication---2020.htm</p>
3	University – enterprise agreements	<p>➔ Scan the signed university – enterprise agreements</p> <p>Because of Quarantine of Covid-19, it is impossible to send the agreements nowadays. But they will be sent asap.</p>



Thank you for you attention!



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