

Periodical Report  
6 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





# Work plan

МИНИСТЕРСТВО ВЫСШЕГО И СРЕДНЕГО СПЕЦИАЛЬНОГО ОБРАЗОВАНИЯ  
РЕСПУБЛИКИ УЗБЕКИСТАН

НАЦИОНАЛЬНЫЙ УНИВЕРСИТЕТ УЗБЕКИСТАНА  
ИМЕНИ МИРЗО УЛУГБЕКА

ERASMUS+  
ПОВЫШЕНИЕ ПОТЕНЦИАЛА В ВЫСШЕМ ОБРАЗОВАНИИ



«УТВЕРЖДАЮ»  
Ректор  
А.Р.МАРАХИМОВ  
2018 г.

## ВНУТРЕННИЙ ПЛАН

реализации мероприятий проекта:

«Новые и инновационные курсы по точному сельскому хозяйству»  
«New Innovation Courses of Precision Agriculture» - NICOPA

Ташкент 2018

Ref. No	Activities	Start	End	Responsible person for activity
<b>PREPARATION</b>				
1.1	Review of the current curricula for BA/MSc in target area in PC HEIs.	15.11.2018	30.04.2019	Abdumanap Nasirov Ilkhomjon Abdullaev Mashkura Fakhrutdinova
1.2	Agreement on instructional strategy and guidelines for BA/MSc curricula design including the use of new Educational Technologies	15.11.2018	31.03.2019	Abdumanap Nasirov Ilkhomjon Abdullaev Tokhtasin Abdrakhmonov
<b>DEVELOPMENT</b>				
2.1	a) Prepare a set of new core curricula and transferable modules inclusive innovative teaching/ learning facilities; develop syllabi; b) adopt on institutional level c) accredit on national level	a) 01.12.2018 b) 01.10.2019 c) 01.10.2020	a) 30.03.2020 b) 30.09.2020 c) 31.08.2021	Rasul Rakhmonov Abdumanap Nasirov Ilkhomjon Abdullaev Tokhtasin Abdrakhmonov
2.2	a) Prepare a set of documentation for PAL and VCR; b) purchase the equipment incl. software; install the equipment	a) 01.02.2019 b) 01.03.2019	a) 30.09.2019 b) 30.01.2020	Abdumanap Nasirov Ilkhomjon Abdullaev Pavel Parchinsky Abdujalil Muminov Bekzod Rakhmonov
2.3	a) Casting criteria for participants and retraining program for academic teachers. b) Retrain academic teachers in new curricula using innovative teaching/ learning facilities and agreed instructional strategies	a) 01.01.2019 b) 01.09.2019	a) 30.03.2019 b) 31.08.2020	Abdumanap Nasirov Ilkhomjon Abdullaev Mashkura Fakhrutdinova Tokhtasin Abdrakhmonov
2.4	To update the current BA/MSc curricula/create updated programs in the target area according to the Bologna requirements and the new developments	01.04.2019	30.09.2020	Ilkhomjon Abdullaev Mashkura Fakhrutdinova Azizjon Ruziev Pavel Parchinsky
2.5	Master Classes in new curricula /pilot operation of PAL and VCR	01.09.2020	30.04.2021	Abdumanap Nasirov Ilkhomjon Abdullaev Bakhtiyar Kholmatjanov Azizjon Ruziev
2.6	Pilot teaching/operation of PAL and VCR	01.08.2020	14.11.2021	Ilkhomjon Abdullaev Bakhtiyar Kholmatjanov Azizjon Ruziev Abdujalil Muminov
<b>QUALITY PLAN</b>				
3.1	The Quality assurance strategy/Q Plan of each PC university including internal/external Quality evaluation/reports according to Q Plan	15.11.2018	14.11.2021	Abdumanap Nasirov Ilkhomjon Abdullaev Tokhtasin Abdrakhmonov Tulkin Abdullaev

<b>DISSEMINATION &amp; EXPLOITATION</b>				
4.1	Project DISS& EXP /communication plan using a Set of Promotional Materials; Dissemination Events, Joint WEB based platform, "NICOPA+" Agreement	15.11.2018	14.11.2021	Rasul Rakhmonov Abdumanap Nasirov Bakhtiyar Kholmatjanov
4.2	Full media coverage of the project activities inclusive developing and maintenance of Joint WEB based platform	15.11.2018	14.11.2021	Abdumanap Nasirov Ilkhomjon Abdullaev Bakhtiyar Kholmatjanov Abdujalil Muminov
4.3	Develop a set documentation on PASO with stakeholders support /purchase /install equipment /establish	01.02.2019	30.04.2020	Abdumanap Nasirov Ilkhomjon Abdullaev Bakhtiyar Kholmatjanov Abdujalil Muminov
4.4	Staff training for PASO, establishing Regional /International PASO network, pilot operation	01.04.2020	30.09.2021	Abdumanap Nasirov Ilkhomjon Abdullaev Tulkin Abdullaev Pavel Parchinsky
4.5	Refresh training courses for graduates in PASO	01.09.2020	31.07.2021	Tokhtasin Abdrakhmonov Mashkura Fakhrutdinova Bakhtiyar Kholmatjanov
4.6	International BA/ MSc Summer Schools	01.04.2020	31.04.2021	Rasul Rakhmonov Abdumanap Nasirov Ilkhomjon Abdullaev
<b>MANAGEMENT</b>				
5.1	Management of the project including project management online, daily project administration and coordination	15.11.2018	14.11.2021	Abdumanap Nasirov Ilkhomjon Abdullaev
5.2	Coordination meetings	15.11.2018	14.11.2021	All participants

Abbr.: PAL - Precision agriculture lab  
VCR - Virtual Class Room  
PASO - Precision Agriculture Service Office

Координатор проекта

Насиров А.А.



# Work group

No.	Name; email	Role in project	Position
1.	Abdumanap Nasirov <a href="mailto:aanasirov1962@mail.ru">aanasirov1962@mail.ru</a>	National Coordinator and contact person of the project (WP1.2 Preparation, WP2.1, 2.2, 2.3, 2.5, 2.6 Development, WP3.1 Quality, WP4.1, 4.3, 4.4, 4.5, 4.6 Dissemination, WP5.1, 5.2 Management)	Associate Professor, Head of Department of Semiconductors and Polymers Physics
2.	Rasul Rakhmonov <a href="mailto:rrakhmonov@nuu.uz">rrakhmonov@nuu.uz</a>	Administrative Staff (WP1.2 Preparation, WP4.1, 4.2, 4.6 Dissemination, WP 5.2 Management)	Vice-rector for International Relations
3.	Tulkin Abdullaev <a href="mailto:t.abdullaev@inbox.ru">t.abdullaev@inbox.ru</a>	Project Advisor (WP3.1 Quality, WP4.4 Dissemination)	Associate professor, Department of Geodesy and Geoinformatics
4.	Tokhtasin Abdrakhmonov <a href="mailto:soilecology@yandex.ru">soilecology@yandex.ru</a>	Academic leader (WP1.1, 1.2. Preparation, WP2.1, 2.3, 2.4 Development, WP3.1 Quality, WP4.5 Dissemination)	Dean of the faculty Biology and Soil Sciences
5.	Mashkura Fakhrutdinova <a href="mailto:mashkura.fakhrutdinova@mail.ru">mashkura.fakhrutdinova@mail.ru</a>	Researcher (WP1.1, 1.2. Preparation, WP2.1, 2.3, 2.4 Development, WP3.1 Quality, WP4.5 Dissemination)	Associate professor, Department of Soil Sciences
6.	Pavel Parchinskiy <a href="mailto:pavelphys@mail.ru">pavelphys@mail.ru</a>	Researcher (WP1.1, 1.2. Preparation, WP2.2, 2.4 Development, WP3.1 Quality, WP4.4, 4.5, 4.6 Dissemination)	Associate professor, Department of Semiconductors and Polymers Physics
7.	Ilkhomjon Abdullaev <a href="mailto:ilkhomjon.abdullaev@gmail.com">ilkhomjon.abdullaev@gmail.com</a>	Project Manager (WP1.1, 1.2 Preparation, WP2.1, 2.2, 2.3, 2.4, 2.5, 2.6 Development, WP3.1 Quality, WP4.3, 4.4, 4.6 Dissemination, WP5.1, 5.2 Management)	Associate professor, Department of Geodesy and Geoinformatics
8.	Bakhtiyar Kholmatjanov <a href="mailto:b.kholmatjanov@gmail.com">b.kholmatjanov@gmail.com</a>	Researcher (WP1.1, 1.2. Preparation, WP2.1, 2.2, 2.4, 2.5, 2.6 Development, WP3.1 Quality, WP4.1, 4.2, 4.3, 4.4, 4.5 Dissemination)	Associate professor, Department of Astronomy and Atmosphere Physics
9.	Azizjon Ruziev <a href="mailto:azizjon.ruziev84@gmail.com">azizjon.ruziev84@gmail.com</a>	Teacher (WP1.1, 1.2. Preparation, WP2.1, 2.2, 2.4, 2.5, 2.6 Development, WP4.6 Dissemination)	Senior Lecturer, Department of Geodesy and Geoinformatics
10.	Abdujalil Muminov <a href="mailto:mominov010@gmail.com">mominov010@gmail.com</a>	Teacher (WP1.1, 1.2. Preparation, WP2.1, 2.2, 2.4, 2.5, 2.6 Development, WP4.2, 4.3 Dissemination)	Teacher, Department of Cartography
11.	Bekzod Rakhmonov <a href="mailto:bekzod_13@bk.ru">bekzod_13@bk.ru</a>	Technical Staff (WP2.2, WP4.1, 4.3 Dissemination);	Accountant



# Courses to update

Name of the course to be upgraded	Person/teacher/department/faculty responsible for the course upgrade	What has to be upgraded in the course?	Deadlines
<b>Agricultural Meteorology</b>	<b>Bakhtiyar Kholmatjanov- Associate professor, Department of Astronomy and Atmosphere Physics</b>	Update methods of using optical and thermal infrared Remote sensing data to estimate agro-meteorological parameters.	30.09.2020
<b>Remote Sensing</b>	<b>Ilkhomjon Abdullaev- Associate professor, Department of Geodesy and Geoinformatics</b>	Upgrade methods of effective using and application in specific area of Remote Sensing Data and Geospatial Technologies	30.09.2020
<b>Innovative technologies in soil science</b>	<b>Tokhtasin Abdrakhmonov - Dean of the faculty Biology and Soil Sciences</b>	Update integration of the multi and hyperspectral sensors data for soil science	30.09.2020
<b>Soil cover monitoring</b>	<b>Mashkura Fakhrutdinova- Associate professor, Department of Soil Sciences</b>	Design and implement new methods using Remote Sensing and GIS technology in soil mapping and monitoring	30.09.2020



# Criteria for teacher selection for trainings



NICOPA:  
NEW AND INNOVATIVE COURSES FOR PRECISION AGRICULTURE  
597985-EPP-1-2018-1-KZ-EPPKA2-CBHE-JP  
NICOPA Selection Criteria



NICOPA:  
NEW AND INNOVATIVE COURSES FOR PRECISION AGRICULTURE  
597985-EPP-1-2018-1-KZ-EPPKA2-CBHE-JP  
NICOPA Selection Criteria



## NICOPA Selection Criteria for teachers

### Objective:

This document contains information about selection criteria for teachers to participate in trainings planned at EU universities.

### Selection Committee:

1. Dr. Rasul Rakhmonov (Chair, NUU)
2. Dr. Abdumanap Nasirov (Vice chair, NUU)
3. Dr. Tokhtasin Abdrakhmonov (member, NUU)
4. Dr. Khamidxon Muborakov (member, NUU)

### Compulsory (scanned) Documents:

1. Photocopy of international passport (only main/photo page)
2. Academic and/or professional Curriculum Vitae (europass model)
3. English language certificate
4. Motivation Letter
5. One letter of recommendation supporting your application
6. Other Documentation (optional)

### Selection Criteria:

The selection procedure is established according to the minimum requirements set by the European Commission. The selection procedure guarantees the transparency of the selection process and an equitable treatment of individual applications. The selection process is starting with shortlisting. The short list will be based on an interview by national (local) coordinator persons for initial "filtering". This initial filtering based on rating contributes to the selection procedure. Rating is done by national (local) coordinator and is based on this standard evaluation form.

The Selection Committee will receive a summary of ratings and (filtered) proposals from the project administration, where we also will take care of all quotas as planned in the proposal. Each applicant will be interviewed. Based on the ratings and interviews the Selection Committee will provide a proposal for the project leader before places being offered on the mobility programme.

### NICOPA Point Score

Rating	Code Rating
80 - 10 0	Outstanding
60 - 80	Highly competent
40 - 6 0	Competent
20 - 4 0	Not yet competent
0 - 20	Not achieved

## NICOPA Selection Criteria for teachers

### Prerequisites:

1. Working experience in NUU for at least 3 years;
2. Lecturing experience of at least 2 years;
3. Basic education in the field related with trainings within the project.

№	Applicant: Criteria Items	Full Name	
		Points max.	Points scores
1.	Level of English of instruction at host institution	20	
2.	Average of grades in presented certificates	20	
3.	Prior Learning in subjects related with trainings within the project	20	
4.	Motivation letter	20	
5.	Bonus points (max. 4 points each) -Publications -Conference presentations -Teaching Experience -First scholarship award -Other	20	
<b>TOTAL Points (..... / 100)</b>		<b>100</b>	
Evaluator is encouraged to conduct a personal/phone interview where this is deemed necessary to fairly assess the candidate's qualifications			
Additional Comments:			



# Teacher that will develop new courses

No		Name, Surname of the participant	Position	E-mail
1	Remote Sensing and Application of Earth and Environment related PA	Ilkhomjon Abdullaev	Associate professor, Geodesy and Geoinformatics Department	<a href="mailto:ilkhomjon.abdullaev@gmail.com">ilkhomjon.abdullaev@gmail.com</a>
2	Using of SENTINEL 1-2-3 imagery for agricultural field monitoring	Ilkhomjon Abdullaev	Associate professor, Geodesy and Geoinformatics Department	<a href="mailto:ilkhomjon.abdullaev@gmail.com">ilkhomjon.abdullaev@gmail.com</a>
3		Abdujalil Muminov Sevar Salohitdinova	Teacher, Cartography Department	<a href="mailto:mominov010@gmail.com">mominov010@gmail.com</a> <a href="mailto:sevar.salohitdinova@gmail.com">sevar.salohitdinova@gmail.com</a>
4	Global Navigation Satellite Systems (NAVSTAR, GLONASS, GALILEO, etc.)	Azizjon Ruziev	Senior Lecturer, Geodesy and Geoinformatics Department	<a href="mailto:azizjon.ruziev84@gmail.com">azizjon.ruziev84@gmail.com</a>
5	Optimizing computer vision algorithms and real-time implementations:	Erkin Mirmakhmudov	Associate professor, Geodesy and Geoinformatics Department	<a href="mailto:erkin_mir@mail.ru">erkin_mir@mail.ru</a>
6	Basics of the Precision agriculture – characteristics, technologies, economic efficiency, optimal use of resources	Bakhtiyar Kholmatjanov	Associate professor, Department of Astronomy and Atmosphere Physics	<a href="mailto:b.kholmatjanov@gmail.com">b.kholmatjanov@gmail.com</a>
7	Yield sensors for Precision Agriculture	Abdumanap Nasirov	PhD, associate professor, Head of Department of Semiconductors and Polymers Physics	<a href="mailto:aanasirov1962@mail.ru">aanasirov1962@mail.ru</a>
8	Soil physical properties and its measurement	Pavel Parchinskiy	Associate professor, Department of Semiconductors and Polymers Physics	<a href="mailto:pavelphys@mail.ru">pavelphys@mail.ru</a>
9		Mashkura Fakhrutdinova	Associate professor, Department of Soil Sciences	<a href="mailto:mashkura.fakhrutdinova@mail.ru">mashkura.fakhrutdinova@mail.ru</a>
10	Application of Precision Agriculture for crops growing	Tokhtasin Abdrakhmonov	Dean of the faculty Biology and Soil Sciences	<a href="mailto:soilecology@yandex.ru">soilecology@yandex.ru</a>



# Equipment & Software

Equipment/Software	Name of the person(s) responsible for the equipment/software installation	Occupation of the responsible persons	Contact information of the responsible persons
Equipment	Abdumanap Nasirov	Associate Professor, Head of Department of Semiconductors and Polymers Physics	<a href="mailto:aanasirov1962@mail.ru">aanasirov1962@mail.ru</a>
Software	Ilkhomjon Abdullaev	Associate professor, Department of Geodesy and Geoinformatics	<a href="mailto:ilkhomjon.abdullaev@gmail.com">ilkhomjon.abdullaev@gmail.com</a>

# Dissemination plan

## New and Innovative Courses for Precision Agriculture

NICOPA strategy - plan for Dissemination, Sustainability and exploitation.

Effective dissemination is essential in order to make sure that the project and their effect will be visible. The NICOPA consortium will be disseminating the results of the project to multiple audiences, via different channels, at different intervals, etc. The aim of this dissemination strategy is to maximize the impact, visibility and credibility of the project. The objectives of the strategy are as follows:

- Design, develop and regularly update the NICOPA website.
- Share information about the project and publish its findings via both traditional media (e.g. press relation) and digital media (e.g. social media)
- Transfer knowledge to industry about changes in academic area - the creation of new training materials, educational resources and the new curricula.
- Support the development of a strategy for the exploitation.

### 1. Strategy of activities

The dissemination strategy emphasizes free and efficient information exchange, delivering outcomes, and interaction with other external institutions associated with the activities of the project. Dissemination phase of the project consists of the following activities: design and maintenance of the project website, social media, annual newsletters, development of PR materials, the awareness building events and exploitation actions in Uzbekistan.

Dissemination and exploitation activities will address the following target groups and be organized following:

- Event-based dissemination. The project will organize a minimum of 3 annual dissemination workshops to inform and engage with the national academic communities. The Final project Conference will address a broader audience bringing together additionally policy makers, NGOs, education authorities, other stakeholders important to the best practice proliferation in the countries.

- Web-based dissemination. The project website will serve as a major interface and community building platform. In addition to being a repository to all tangible outcomes (training and teaching materials, webinars, results of the Feasibility Study, Repository entry point, methodological materials, reference materials, etc.), it will enable community activities (blogs, social networks interface, FAQ, etc.). On top of that, all partners will use other available web-based dissemination channels (own websites, mailing lists, community resources). All target groups will be addressed.

- Traditional dissemination. The project will produce the set of traditional promotional materials, it will publish major results in media (general public) and professional journals (academic community). Additionally, the project will organize several briefing meetings with policy making stakeholders to enable a multiplier effect.

2. Exploitation planning and exploitation of the results:

- Exploitation planning. The project will plan the exploitation (including how to bear running costs) of such principle outcomes as the set of developed methodological materials, the Repository, the website, etc. for the period of 3-5 years after the project end.

- Exploitation nature: public nature - openly available for re-use.

- Involving into practical aspects of dissemination/exploitation: involving external stakeholders in Evaluation trial and in developing practical tutorials during workshops to ease external exploitation and uptake.

- The executive part of the Memorandum will include agreed and supported measures aimed at exploitation of the project results (concluded at the Final Conference).

- Activities after the end of the project: continuing further dissemination (as described above); developing ideas for future cooperation; evaluating achievements and impact; contacting relevant media; contacting policy-makers on request; cooperating with the European Commission by providing useful inputs to its dissemination and exploitation efforts.

## 2. Components of the dissemination and sustainability plan of the project

### 2.1. Target groups:

- 2.1. Specific audience (SA):
- Academic community: students, researchers, professors or other people involved in activities related to the project's topic and interested in following its development and outcomes);
  - stakeholders, potential employers of graduates; experts or practitioners in the field (graduate engineers) and other interested parties;
  - decision-makers at local, regional, national level;
- Generic audience (GA):
- People who may not have professional interests in the project, but that in terms of visibility result to be very important for the project.

### 2.2. Channels:

- Traditional channels: local, regional, national press and media;
- Modern social networks, such as: Newsletter Facebook page; Twitter profile; Instagram; Research gate etc.

### 3. Activities:

3.1. In order to regularly update information on the project web-site to assign a "blogger" from each university.

3.2. Development of a publication plan by each of the universities (1 publication every 3 months) (SA)

3.3. Publication can be in local or national media channels (newspapers, information leaflets, brochures, other print media; TV etc.); on the Website of the university; social media networks (for instance, Facebook, Instagram, Twitter, etc.); every publication should contain a link to the project website [www.nicopa.eu](http://www.nicopa.eu); every publication (scan of it if it's printed or link to it in the Internet where this publication is situated) should be sent to [a.starikow@ecm-space.de](mailto:a.starikow@ecm-space.de)

3.4. Schedule of local sustainability activities and dissemination of the project results (one event every 3 months) each year of the project; the schedule should be developed by the regional coordinator; activities can be: local meetings of the partner universities, conferences, etc.

3.5. Development of a list of related universities and non-academic partners involved in the activities of the project; organizations interested in the project.

3.6. Development of a schedule of meetings for non-academic partners, such as other universities, organizations that might be interested in the project

3.7. Preparation of press releases of each of the meetings mentioned in 3.4. and 3.6.

3.8. Creating a newsletter (news about NICOPA, news from the world related to the topics discussed); newsletter release - 3 times x year

3.9. Development of the website of the project and its regular update (once 3 months) (SA);

3.10. Developing an agreement "NICOPA Plus" in order to involve new participants outside the consortium in the project

3.11. Developing a memorandum of the continued cooperation of the project consortium partners (to ensure the sustainability of the project results after the end of the project) minimum for 5 years

## 4. Dissemination materials

Project visibility materials include production of newsletters and project posters, project leaflets. The project will publish annual Newsletters containing information about latest developments of the consortium. The newsletters will be structured by main activities reflecting project objectives. The newsletters will be illustrative with quality pictures and schemes delivering appropriately understandable information. Newsletters will be distributed widely, through enterprise partners, university networks, students associations, etc.

Awareness building events, seminars will be organized at UZ partner Universities. These seminars are aimed at spreading information about results to local communities (especially among potential students). Local media incl. newspapers and TV will be used for this activity. Brochures about project will be distributed. However, awareness building activity is not limited with organizing seminars by the project. Project team will take every possibility to increase visibility of the project implementation and outcomes through presenting during Erasmus+ programme and other Erasmus+ project events.

## 5. Dissemination methods for NICOPA

Methods	Purpose	Language
Project website	A project website is one of the most universal dissemination tools. It will contain information for different audiences. It will be updated regularly.	English
Universities' websites	Information dedicated for academic community, recommended in national languages and in English	National languages and/or English
Social media	Information for project partners, engagement of partners in project planning and improvement.	English
Press releases	Flyers in printed form can be handed out at conferences, other events or to colleagues / students at each institution. An electronic version (e.g. PDF file) can also be circulated electronically via the project website.	National languages and/or English
Programme meetings	Programme meetings are excellent opportunities for project partners to learn from each other, discuss common issues, and get feedback on their work.	English
Conference presentations / posters	National and international conferences are an important opportunity to share achievements with experts in the field.	National languages and/or English
Events, including lectures, demonstration and workshops	There are useful in the project to get feedback from students and other stakeholders (including industry) on functionality and usability	National languages and/or English



# Schedule of dissemination events

No	Dissemination event	Dissemination method	Period
1	Coordination meeting with Uzbek partner universities, NUU, Tashkent, Uzbekistan	Event-based	November, 2018
2	Results of Erasmus+ CBHE Grantholders ´Meeting 28-30 January 2019, Brussels (Belgium)	Event-based, web-based	January, 2019
3	Project announcement on website of NUU, Tashkent, Uzbekistan	Web-based	January, 2019
4	Kick-off Meeting, TUB, Berlin, Germany	Event-based, web-based	March, 2019
5	Erasmus+ DSinGISAwareness building seminar, SamSACEI, Samarkand	Event-based, web-based	April, 2019
6	The field monitoring of the project NICOPA	Event-based	May, 2019
7	Result of training, TUB, Berlin, Germany	Event-based, Web-based	September, 2019
8	Erasmus+ Information day, TSTU	Event-based	October, 2019
9	Erasmus+ Information day, NUU	Event-based	October, 2019
10	International Uzbek-Chinese Symposium, China	Event-based	October
11	Faculty meeting, NUU	Event-based	November
12	Information about project related events, achievements, materials etc. on the web of:- Erasmus+ NICOPA project ( <a href="https://nicopa.eu">https://nicopa.eu</a> );-NUU ( <a href="https://nuu.uz">https://nuu.uz</a> );-Social media and channels ( <a href="http://facebook.com">http://facebook.com</a> , <a href="http://telegram.org">http://telegram.org</a> );-mass media ( <a href="http://kun.uz">http://kun.uz</a> , <a href="http://uza.uz">http://uza.uz</a> , <a href="http://uzbekistan24.uz">http://uzbekistan24.uz</a> , <a href="http://daryo.uz">http://daryo.uz</a> )	Web-based	Regularly



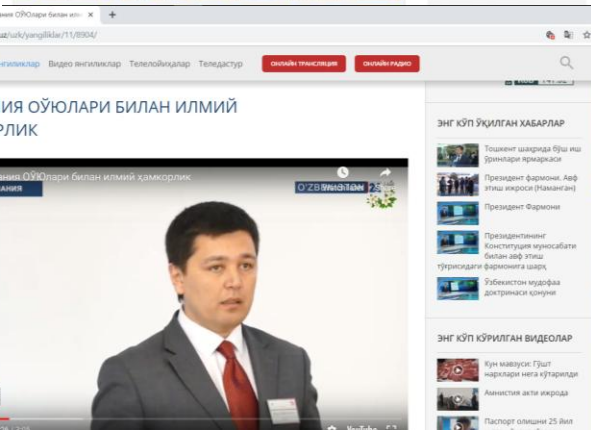
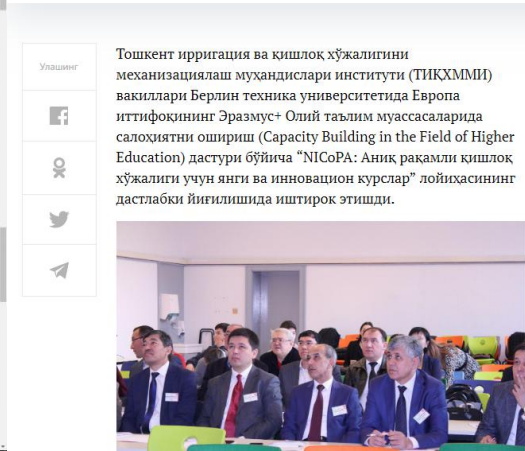
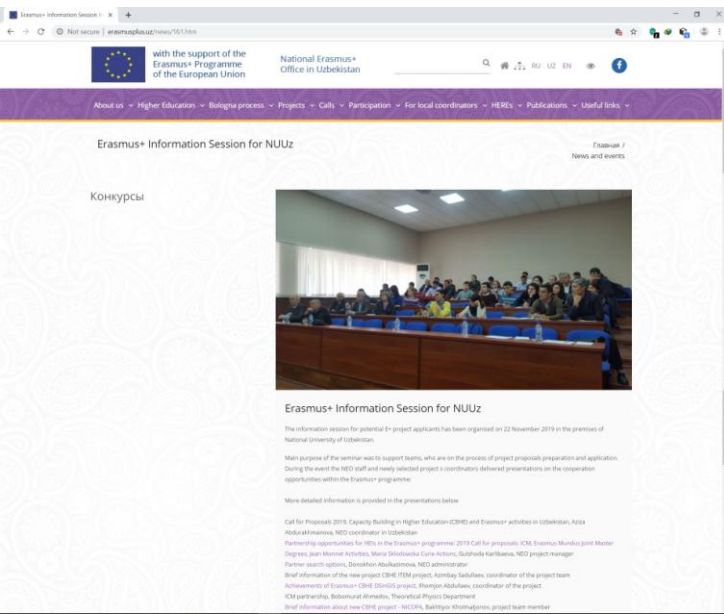
# Non-consortium organizations

No	Name of organization	Address
1	"UNITEK STANDART" Ltd.	Mustaqillik str. 68, Tashkent, Uzbekistan
2	"Asrorbek Javohir" farmer associations	Village Shomakulum Khiva district Khorezm region, Uzbekistan



# Dissemination (internet links)

1. <http://www.erasmusplus.uz/news/161.htm>
2. <http://www.erasmusplus.uz/Information-about-the-projects/Erasmus-plus/4-call/index.htm>
3. <http://tiiame.uz/oz/article/deuch>
4. <http://uzbekistan24.uz/uzk/yangiliklar/11/8904/>
5. <https://kun.uz/news/2019/03/09/uzbekiston-otm-germaniya-universitetlari-bilan-hamkorlikni-kuchaytirmoqda>
6. <https://daryo.uz/2019/03/07/uzbekiston-milliy-universiteti-nicopa-aniq-qishloq-xojaligida-yangi-va-innovatsion-kurslar-loyihasi-uchrashuvida-qatnashdi/>
7. <http://uza.uz/oz/society/berlinda-zmu-mutakhassislari-ishtirokida-isti-bolli-loyi-a-a-06-03-2019>





# Dissemination (in Educational and Methodological Council)





# Questionnaire for students

## Erasmus + CBHE KA2 Project

### Questionnaire

Indicative Questions to determine the level of awareness about the NICOPA project among students of NUU

\*Required

1. Email address \*

\_\_\_\_\_

2. 1. Do you know about the ERASMUS+ program? \*

Mark only one oval.

- Yes  
 No

3. 2. Do you know about the project NICOPA? \*

Mark only one oval.

- Yes  
 No

4. 3. Please inform us from whom or how have you found information about project? \*

*Tick all that apply.*

- from Social Media  
 from teachers  
 from internet  
 from students

Other:  \_\_\_\_\_

5. 4. Is there an appropriate student guidance and counseling system in place? \*

Mark only one oval.

- Yes  
 No

6. 5. How necessary is the modernization of the educational process? \*

Mark only one oval.

- no need  
 modify slightly  
 necessary  
 high need to improve

7. 6. Do you think that teaching of special disciplines is at a satisfactory level? \*

Mark only one oval.

- Yes  
 No

8. 7. Do you think that the content of special disciplines is at a satisfactory level? \*

Mark only one oval.

- Yes  
 No

9. 8. Do you think that proportion between theoretical (i.e. lectures) and practical (i.e. seminars, laboratorial practice, self-study) workload of special disciplines is appropriate each other? \*

Mark only one oval.

- Yes  
 No

10. 9. Do you think that the balance between lectures / laboratories / practical exercises in developing curricula will help to improve the quality of education, having more hours of practical training than others? \*

Mark only one oval.

- Yes  
 No

11. 10. Do you think that equipment in lab and computer classrooms, as well as state of the work stations are at the satisfactory level for the purposes of the study of disciplines in the field of Precision Agriculture? \*

Mark only one oval.

- Yes  
 No

12. 11. Do you think that literature at the libraries, such as books, academic publications; electronic sources, academic journals etc. are up-to-date and are able to improve the quality of learning and increase your knowledge of special disciplines? \*

Mark only one oval.

- Yes  
 No



# Quality Assurance Group

Name, Surname	Occupation	Organization	Contact info (email)
<b>Mashkura Fakhruddinova</b>	Associate professor, Department of Soil Sciences	NUUZ	<a href="mailto:mashkura.fakhruddinova@mail.ru">mashkura.fakhruddinova@mail.ru</a>
<b>Pavel Parchinskiy</b>	Associate professor, Department of Semiconductors and Polymers Physics	NUUZ	<a href="mailto:pavelphys@mail.ru">pavelphys@mail.ru</a>
<b>Ilkhomjon Abdullaev</b>	Associate professor, Department of Geodesy and Geoinformatics	NUUZ	<a href="mailto:ilkhomjon.abdullaev@gmail.com">ilkhomjon.abdullaev@gmail.com</a>



# Quality Assurance Plan

**New and Innovative Courses for Precision Agriculture**  
(NICOPA)

REF. No.: 597985-EPP-1-2018-1-KZ-EPPKA2-CBHE-IP

## 1. The QA strategy/plan

Quality assurance (QA) is an integral part of the internal management of all EU institutions following the standards in the European Higher Education Area. Quality assurance helps to support teachers and build expertise and capacity in the higher education system to deliver positive outcomes for students. Through sharing, understanding and applying standards and expectations, quality assurance helps to raise standards, expectations, and levels of consistency across HEIs. Efficient and effective approaches to quality assurance will require building on local practices, developing working approaches across HEIs authorities and partners and linking this work at a national level.

**The following objectives are defined to achieve it based on monitoring, self-evaluation and planning for improvement:**

- to ensure that high standards of updated/modernized curricula are maintained and outcomes improved for students;
- to meet standards and expectations through the internal universities resources;
- to analyze and meet National Qualifications Frameworks;
- to ensure assessment materials and exemplification, including those that will be available;
- to ensure that accreditation of the developed curricula at national/institutional levels, regulations and guidelines are met, as well as applicable;
- to train target universities staff and academic faculty on quality improvement processes
- to provide quality assurance approaches of other non-academic partners;
- quality control as a part of external evaluation

### Activities for QA system development:

- Development of the internal quality assurance plan and a quality group of responsible specialists in partner universities. This means that groups should have effective quality checks in place, define assessment tasks and activities, valid and reliable assessment decisions in line with national standards, and responsible for the internal verification of their assessments.
- Development of the procedure for self-monitoring (including reports template, questionnaires, surveys plans and feedback reports from target students/academics/stakeholder groups)
- Peer-reviews regarding quality assessment of new curricula based on quality indicators (quantitative & qualitative assessment); recommendations for quality indicators and peer-review procedure are to be developed.
- Monitoring and Evaluation (M&E) including self-monitoring reports with necessary conclusions and recommendations every 6 months (including comparison with work plan of the project activities; evaluation of outcomes and their quality in form of special developed report template; interviews with stakeholders; online evaluation). It will ensure an appropriate focus on coherent planning, checking, sampling, reviewing and providing feedback for quality improvement.
- External monitoring: external quality evaluation provides information on strategy, operations and learning with focus on impartiality, usefulness, technical adequacy, stakeholder involvement, value for inputs and feedback. Mid-term independent project evaluation is planned in the middle of the 2<sup>nd</sup> year and upon project completion,

which are being conducted as part of project's external evaluation. External expert (EE) will be responsible for midterm and final project evaluation. EE will conduct the evaluation session during the project's conference or partners' meetings to review and discuss M&E concept/tools and mid-results with target universities. Within this external evaluation mechanism, feedbacks on project quality or risks identified will be provided by an External Evaluator to the coordinator. Findings of the evaluation will be used to improve project's performance, continuous feedback and organizational and institutional knowledge and learning.

- Inter project Coaching: Establishing of the Inter Project Coaching and PMB to serve as a structure to initiate corrections/improvements in the Work Plan/activities based on results of self-monitoring and external evaluation. This can also ensure that appropriate target-setting, monitoring and tracking of progress is in place and self-monitoring is based on a wide range of evidence across all aspects/outputs of the project including benchmarking information to inform improvement planning and raising achievement.
- Project approaches will include opportunities for collaboration both virtual and face-to-face (for example, through network groups and professional development workshops). Through the series of workshops curriculum planners and managers (faculty heads/principal teachers) of target universities will train to build on existing practices to ensure that quality assurance activities are fit for purpose, comparable, manageable and accessible. The workshops also will provide opportunities and support for staff
- Working collaboratively on quality assurance, verification and contributing to the National Qualification Frameworks.
- During Quality Assessment process the following outputs/project products should be examined: competence matrix, syllabuses, learning materials, tests, delivery and support system of Web-based courses, new BA/MA courses implementation and learning.
- Milestones: self-monitoring system established; feedback, questionnaire, annual reports; QA groups / centres/responsible specialists in place; online evaluation in function; peer-reviews; the Inter Project Coaching and Evaluation Board established; report of inter project coaching; external M&E reports.
- Indicators: number of self-monitoring reports, number of IEB meetings; number of questionnaires and surveys; number of reports of inter project coaching; external M&E reports; number of internal QA groups; number of specialists trained in QA.

## 2. Plan of monitoring of the project activities

Periodic reporting on the project achievements based on self-monitoring reports	2019		2020		2021	
	15/05	15/11	15/05	15/11	15/05	15/11

Periodic, interim, final and annual reports should be based on the following contents:

- The project management
- Credibility of the project activities
- Efficiency of the project realization
- Project achievements (results)
- Impact of the project measures (follow ups)
- Sustainability of the project results. Periodic surveys and feedback analysis of target groups.
- Communication process between consortium partners
- Dissemination of the project activities and results



# Concept of PASO (draft)

PASO-Offices are to be established in each target University with the support of non-academic organizations (core enterprises etc.) in University organizational form based on local conditions.

The possible scope of activities of PASO:

- marketing of the needs in the area of PA and the development of appropriate services for different target groups.
- Development and implementation of training courses and/or advanced training of different target groups, such as farmers and engineers,
- marketing of educational services
- service for farmer associations
- study of requirements of employers
- study of compliance of competences/skills of the graduates regarding the requirements of employers, information support
- periodical conducting of the University audit on existing training courses aiming to replace/ upgrade of outdated curricula and develop new ones
- studying the needs of industrial enterprises in service training of professional personnel
- searching for interested organizations and sponsors
- upgrading outdated agricultural equipment – to equip old machinery with sensors, navigation systems for the improvement of operations
- creating service for airborne monitoring of fields and farms
- processing of satellites data.

Additionally, PASO office can be considered an integral part of new or existing student startups for innovative technology development enterprises, business incubators, technology parks or subdivisions. One of the main tasks of PASO is carrying out of introduction seminars regarding Precision Agriculture.

Universities can create a PASO Office based on new laboratories in the frame of the project to expand their capabilities. A PASO Office can provide services based on the development of the materials created within the project disciplines e.g. seminars on PA; engineering services on request of interested people / companies in relevant fields.

PASO's strategic objective is to create conditions for the development of the project results after its completion and to facilitate the flow of funds for maintenance and development created by the project laboratory facilities. Legal form of PASO may differ from structural unit of the University to separate legal entity.



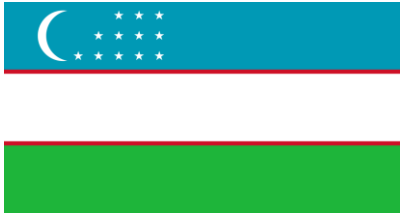


# Communication

For communication following technics are using:

- E-mail, Skype, ZOOM, IMO, Telegram, WhatsApp (with EU, CA and UZ partners),
- Telephone (with UZ partners)

There are no problems with communication



Thank you for you attention!



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

**Dr. ABDUMANAP NASIROV**  
**National coordinator of the NICOPA**  
[aanasirov1962@mail.ru](mailto:aanasirov1962@mail.ru)