

Periodical Report
6 Months of project
implementation

**New and Innovative
Courses for Precision
Agriculture**

**Turkmen Agricultural University
Named after S.A. Niyazov**

Mr. Durdyev Orazmuhammet



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

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



Work plan

THE MINISTRY OF AGRICULTURE AND ENVIRONMENT PROTECTION OF TURKMENISTAN
 THE MINISTRY OF EDUCATION OF TURKMENISTAN
 TURKMEN AGRICULTURAL UNIVERSITY NAMED AFTER S.A.NIYAZOV

« APPROVED »
 The rector of Turkmen agricultural
 university named after S.A.Niyazov
 _____ D.Myradov
 " ____ " _____ 2019 y.

The plan of carrying out of employment on project "New and Innovative Courses for Precision Agriculture (NICOPA)" performance
 in 2018-2021-s' years

№	Activities	Responsible:	Ref. №	Term of implementation (up to...)	Clarification notes
1	Turkmen agriculture university named after S.A.Niyazov to develop the internal plan of activities of the project.	P1, P8	1.1-2.3; 2.5-4.2; 5.1-5.2.	15.12.2018	To organize the project work group, to assign responsible persons and to approved the project plan
2	To make a list of valid subjects for improvement and introduction in educational process.	P1, P8	1.1	20.12.2018	A list
3	a) Develop questionnaires for analysis of existing curricula (questionnaire for teachers, students, graduates, young professionals, alumni); + a questionnaire for interested in project non-academic partners: potential employers, local associations, representatives of industrial enterprises; b) Develop a schedule to conduct surveys; c) Conduct surveys of various target groups; d) Analyze the answered questionnaires.	P1, P8	1.1	30.12.2018	a) <u>the</u> survey questionnaire should reflect quality level of the analyzed curricula/discipline fully. Possible questions for the questionnaire: the name of discipline, what are the relevant faculties and departments, since which year is discipline taught the number of enrolled students, the balance of practical / theoretical hours and student workload. The existence, year of introduction and "freshness" of technical training tools, computers, software products, educational literature, the use of periodic national, foreign thematic/scientific/technical journals, the availability of trainee position... The practical performance of students in small groups, the number of such works. c) - Conduct a survey of teachers/lecturers, young



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					professionals / graduates potential employers to clarify requirements to competences/ skills of graduates at the university; c) Conduct a meeting of teachers, students, alumni and employers to discuss and analyze results of surveys to take into account their views at updating of relevant subjects.
4	- Develop an analytical report on the results of the analysis of existing curricula/disciplines; - To make a list of curricula that you plan to upgrade. - Develop a schedule for updates of the selected curricula.	P1, P8, P16	1.1	30.04.2019	The curricula
6	a) To examines and adopts the received materials of EU Universities and develops on this basis their own courses, curricula, modules; b) should develop manuals/text books/methodological recommendations for students and teachers for each of the curricula/course/module.	P1, P8	2.1	a) 31.03.2020 b) 31.10.2020	c) Prepare draft of curricula descriptions of new core curricula and transferable modules inclusive innovative teaching/ learning facilities; develop syllabi.
7	a) Accreditation of developed subjects/courses/programmes in accordance with valid University rules. b) Accreditation at the national level.	P1, P8, P16	2.1	a) 30.09.2020 b) 31.08.2021	a) Select and appoint specialist for the development of the curricula in the university and teachers responsible for the development and introduction of new disciplines, courses and curricula; b) New disciplines should be in accordance with the Bologna recommendations course description in English and national languages including the ECTS points. It is recommended to introduce at least 20% of lessons /courses in English.
8	a) Prepare a set of documentation for PAL and VCR; b) Purchase the equipment incl. software; install the equipment.	P1, P8	2.2	a) 30.04.2019 b) 30.01.2020	a) To define an educational class; b) P1, P5 and P8 are responsible for the contracting, purchase and delivery of equipment.



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9	<p>a) Develop criteria for the selection of teachers to participate in trainings planned at EU universities;</p> <p>b) To plan and carry out actions to prepare the selected candidates to participate in trainings including language training;</p> <p>c) Retrain academic teachers in new curricula using innovative teaching/ learning facilities and agreed instructional strategies.</p>	<p>a) P1, P8</p> <p>b) P1, P8</p> <p>c) P1, P8</p>	2.3	<p>a) 31.01.2019</p> <p>b) 30.06.2019</p> <p>c) from 01.09.2019 up to 31.08.2020</p>	<p>In EU universities 3 trainings of teachers are planned. 2 to 3 teachers from each target University can participate in the trainings. Duration of trainings: from 10 till 14 days.</p> <p>After the end of training to organize a meeting for sharing of the knowledge gained in the target universities.</p>
10	<p>- Update existing curricula, make a report on updating;</p> <p>- Develop a curricula description of each updated curriculum in English and national languages including the ECTS points in accordance with the Bologna recommendations;</p> <p>- Accredite the updated disciplines in accordance with valid University rules/national law.</p>	P1, P8, P16	2.4	30.09.2020	
11	<p>a) Starting performance of demonstration master classes (MC) for new subjects/modules;</p> <p>b) pilot operation of PAL and VCR.</p>	<p>a) P1, P8</p> <p>b) P1, P8</p>	2.5	<p>a) start: 01.03.2020</p> <p>b) start: 30.04.2020</p>	MCs are carried out in the form of demonstration lessons with students. The MC will be conducted by professors from European universities. Participants of MC should be the teachers who received trainings in European universities. New technical equipment purchased in the frame of the project will be used during the MCs.
12	Pilot teaching/operation of PAL and VCR.	P1, P8	2.6	Start: 01.09.2020	Pilot teaching should be in accordance with program
13	<p>a) Development of a quality assurance plan for the project;</p> <p>b) Development of recommendations for quality indicators for peer review of new curricula/courses</p>	<p>a) P1, P8</p> <p>b) P1, P8</p>	3.1	<p>a) 15.01.2019</p> <p>b) 31.03.2019</p>	<p>a) On the basis of the project's quality assurance plan to develop a quality assurance plan in the university;</p> <p>b) Template/recommendations for a questionnaire will be provided by P5. P1, P8 organize peer review of updated/new courses.</p>



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14	a) Develop a plan for dissemination and sustainability of the project in university, including activities on involving new participants in the project; b) Operation starting of the first version of the WEB platform.	a) P1, P8, P16 b) P1, P8, P16	4.1 4.2	a) 15.01.2019 b) 01.12.2018	Recommended components of the dissemination and sustainability plan of the project: - In university should assign a “blogger”, who will be responsible for the posting information about the project in the Internet; -Plan of publications (e.g.1 publication every 6 months); - Schedule of local sustainability activities and dissemination of the project results (e.g., one event per quarter). - Plan of local and regional meetings. It is recommended to use scheduled periodic internal and external events; - Post information about participation in the project on the universities’ website (with a link to the project page); - Post on social networks.
15	-Develop an agreement on the continued cooperation of the project participants for the development of its results after the ERASMUS+ financing	P1-P16	4	November 2021	Sign an Agreement in the Final conference
16	Organize dissemination of leaflets about the project amongst students and teachers.	P1, P8	4.1 4.2	Throughout the project until 14.11.2021	Recommendations for the design of information materials about the project are given in Tab. 6
17	a) Develop and approve a package of organizational documents for the creation of PASO in University; b) should purchase and install equipment.	P1, P8	4.3	a) 01.04.2019 b) 30.01.2020	a) Regulations of the structural division, job descriptions should be included in the organizational documents for PASO.
18	a) Conduct training for employees of PASO and start of functioning PASO; b) Start pilot operation of PASO.	a) P1, P2, P5, P8 b) P1, P8	4.4	a) 30.11.2020 b) Start: 01.09.2020	a) responsible for organizing and conducting the training – P2 & P4.
19	Refresh training courses for graduates in PASO.	P1, P8 with support by P2-P5	4.5	Start: 01.10.2020	Select target groups of graduates and develop a program for the training courses, and conduct them.
20	To participate in the organization of International BA/ MSc Summer Schools	P1, P2, P8	4.6	Start: 01.04.2020 End: 31.08.2021	



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21	Management of the project including project management online, daily project administration and coordination.	P1, P8	5.1	Throughout the project	Preparing documentation of the management events and activities of the project incl. preparation of minutes by the local coordinator.
22	Coordination meetings	P1, P5, P8	5.2	Throughout the project	Development of meeting plan will be created every year (incl. international, regional and local meetings).
23	Monitoring and controlling of project activities: development of questionnaires for partner universities regarding project implementation	P1, P5, P8	5.1	First template will be sent in March 2019 Schedule for the reporting: M6, M12, M18, M30, M36	P5 will develop a questionnaire for each 6-month-period that partner universities should fill in until the given deadlines, reporting on the implementation of the project in the university. The complete reports should be sent back to P5.
24	Ensure using SKYPE to held meetings of the project consortium team.	Participants of a consortium	5.1	Throughout the project	Skype meeting of local coordinators should be conducted every 3 months.

The local project coordinator of the Turkmen agricultural university named after S.A.Niyazow

O.Durdyev



Work group

No	Name, Surname, email	Position in the university	Responsibility (Work Packages tasks according to the Work Plan)
1.	Durdyev Orazmuhammet odurdyev@gmail.com	Senior Lecturer, Department of Hydromelioration	The local project coordinator from TAU
2.	Shamedov Merdan sagitarius80@mail.ru	Deputy Dean, Department of Mechanization	performs for the analysis, updating and development of training modules / programs in the specialties Mechanisation of agriculture
3.	Nurgeldiyev Batyr nurgeldiyev94@gmail.com	Senior Lecturer, Department of Mechanization	acceptance and commissioning of new equipment, creation of a new classroom / laboratory, internal and external quality assessment
4.	Soltanov Gurbangeldi gurbansoltanov@gmail.com	Senior Lecturer, Department of Economy and Management	equipment selection, scientific support of hardware implementation of precision farming technologies
5.	Hommatlyev Guwanch hommatlyyevgb@mail.ru	Senior Lecturer, Department of Hydromelioration	performs for the analysis, updating and development of training modules / programs in the specialties Hydrology and hydrometry
6.	Reyimov Dayanch dayancreyimov@gmail.com	Senior Lecturer, Department of Veterinary medicine	performs for the analysis, updating and development of training modules / programs in the specialties Veterinary and fish culture
7.	Pirlekov Merdan merdanpirlekov@gmail.com	Head of the Department of Horticulture	performs for the analysis, updating and development of training modules / programs in the specialties Agronomy and forestry



Courses to update

Courses that are to be upgraded and the deadlines of their updates

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
Agricultural melioration	Durdyyev Orazmuhammet		
Hydrology	Durdyyev Orazmuhammet		
Klimatology	Durdyyev Orazmuhammet		
Geodesy	Yusupov Shirmyrat		
Remote sensing	Shadurdyyev Govshut		
Geodetic works in land management	Rejepov Arslan		
Satellite navigating systems	Shadurdyyev Govshut		
Ecology and environment protection	Misekova Ajapsoltan		
Pastures of Turkmenistan	Misekova Ajapsoltan		
Soil science	Esenow Nury		
Agriculture	Hallyyev Rozgeldi		
Agrochemistry	Seyitkulyyev Yazdurdy		
Protection of plants	Pirlekov Merdan		
Forestry	Atamyradov Akmyrat		
Dendrology	Atamyradov Akmyrat		
Computer graphics	Gurbanmyradowa Leyla		
GIS	Sahetmyradov Sahetmyrat		
Operation of machine tractor park	Shammedov Merdan		



Criteria for teacher selection for trainings

Criteria for Participants for the Training

No	Criteria	Points	% from the general estimation
1.	Academic progress	0-50	50 %
2.	Motivation	0-20	25 %
3.	Possession of the language of learning	0-30	25 %
Total		100	



Teacher that will develop new courses

Teacher responsible for the course upgrade

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
Agricultural melioration	Durdyyev Orazmuhammet		
Hydrology	Durdyyev Orazmuhammet		
Klimatology	Durdyyev Orazmuhammet		
Geodesy	Yusupov Shirmyrat		
Remote sensing	Shadurdyyev Govshut		
Geodetic works in land management	Rejepov Arslan		
Satellite navigating systems	Shadurdyyev Govshut		
Ecology and environment protection	Misekova Ajapsoltan		
Pastures of Turkmenistan	Misekova Ajapsoltan		
Soil science	Esenow Nury		
Agriculture	Hallyyev Rozgeldi		
Agrochemistry	Seyitkulyyev Yazdurdy		
Protection of plants	Pirlekov Merdan		
Forestry	Atamyradov Akmyrat		
Dendrology	Atamyradov Akmyrat		
Computer graphics	Gurbanmyradowa Leyla		
GIS	Sahetmyradov Sahetmyrat		
Operation of machine tractor park	Shammedov Merdan		



Equipment & Software

Responsible persons for the installation of the 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
	Durdyev Orazmuhammet	Teacher of the department "Hydromelioration"	odurdyev@gmail.com
	Shadurdyev Govshut	Teacher of the department "Hydromelioration"	Gowshudowgovshut@mail.ru
	Soltanov Gurbangeldi	Department of Economy and Management	gurbansoltanov@gmail.com



Dissemination plan

Plan and schedule of dissemination events

The name of dissemination	Deadlines
Publications in a press: In newspapers; In magazines.	01.08.2019 01.12.2019
The organisation of a round table on television.	2020
Manufacturing of information posters.	20.05.2019



Schedule of dissemination events

Plan and schedule of dissemination events

The name of dissemination	Deadlines
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The organisation of a round table on television.	2020
Manufacturing of information posters.	20.05.2019



Non-consortium organizations

Non-consortium organization that can be interested in the project

The list of non-consortium organization that can be interested in the project	The list of Potential employers
The Ministry of Education	Project institute "Turkmensuwlymtaslama"
The Ministry of Adriculture	The Ministry of Education
The state committee on a water management	The Ministry of Adriculture
Farms	



Implemented dissemination activities

Planned to publish of the information about the project in mass media:

*(Newspaper “Bereketli toprak” – 01.10.2019;
Newspaper “Нейтральный Туркменистан”-01.09.2019
Magazine “Garagum” – 01.12.2019)*

Dissemination meetings:

(6 meetings are spent - 5 sessions at 5 faculties and 1 on a university academic council in the presence rector)

University website:

(At university there is no own website)



Questionnaire for students



The questionnaire for students (post-graduate student, teachers)
 Faculty _____ Department _____ Date _____



The questionnaire analysis

№	Вопросы анкеты The questionnaire	The answer Ответ
1	Do you know about the ERASMUS+ program? Знаете ли Вы о программе ERASMUS+ ? 1 – yes/да 2 – no/нет 3 – <u>superficially</u> /поверхностно	1) 94-75,2%
		2) 12-9,6%
		3) 19-15,2%
2	Do you know about the project NICOPA? If you know anything about it, please inform us from whom or how have you found out this information? Знаете ли вы о проекте NICOPA, если знаете, то сообщите от кого или как вы узнали эту информацию.	1) 102-81,6%
		2) 7-5,6%



Questionnaire for students

Periodic Report

NICOPA

	1 – yes/да 2 – no/нет 3 – superficially/поверхностно	3) 16-12,8%
3	Evaluate the necessity of the educational process modernization Оцените необходимость модернизации учебного процесса 1 – no/нет необходимости 2 – selectively/выборочно 3 – high/need/высокая необходимость	1) 8-6,4% 2) 24-19,2% 3) 93-74,4%
4	Do you think that teaching of special disciplines is at a satisfactory level? Считаете ли вы удовлетворительным уровень преподавания специальных дисциплин? 1 – yes/да 2 – selectively/выборочно 3 – no/нет	1) 78-62,4% 2) 40-32% 3) 7-5,6%
5	Do you think that the amount of special disciplines is at a satisfactory level? Считаете ли вы удовлетворительным объем специальных дисциплин? 1 – yes/да 2 – selectively/выборочно 3 – no/нет	1) 57-45,6% 2) 54-43,2% 3) 14-11,2%
6	Do you think that the content of special disciplines is at a satisfactory level? Считаете ли вы удовлетворительным содержание специальных дисциплин? 1 – yes/да 2 – no/нет 3 – I find it difficult to answer/затрудняюсь ответить	1) 111-88,8% 2) 7-5,6% 3) 7-5,6%
7	Do you think that proportion between theoretical (i.e. lectures) workload and practical (i.e. seminar, laboratorial practice, self-study) workload of special disciplines is at a satisfactory level? Считаете ли вы удовлетворительным соотношение степени загруженности теоретической частью (например, лекции) к степени загруженности практической частью (например, семинары, работа в лабораториях, самостоятельная подготовка) специальных дисциплин? 1 – yes/да 2 – no/нет 3 – partially/частично	1) 74-59,2% 2) 17-13,6% 3) 34-27,2%
8	Do you think that equipment in laboratories and computer classrooms, as well as state of computers' operational systems are at the satisfactory level for the purposes of the study of disciplines in the field of Precision Agriculture? Считаете ли вы удовлетворительной оснащенность лабораторий и компьютерных классов, состояние оборудования и П.О. для целей изучения курсов по точному сельскому хозяйству? 1 – yes/да 2 – I find it difficult to answer/затрудняюсь ответить 3 – no/нет	1) 2-1,6% 2) 19-15,2% 3) 104-83,2%
9	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 leaning and increase your knowledge of special disciplines? Считаете ли вы, что литература в библиотеках, книги и научные публикации, электронные ресурсы, научные журналы и т.п. являются наиболее современными и способны улучшить качество усвоения материала и знаний по специальным дисциплинам? 1 – yes/да 2 – I find it difficult to answer/затрудняюсь ответить 3 – no/нет	1) 21-16,8% 2) 14-11,2% 3) 90-72%
10	What do you think should be also done in order to upgrade the quality of teaching and learning of special disciplines? Как, по вашему мнению, можно ли улучшить качество преподавания и усвоения специальных дисциплин? 1 – no/нет 2 – I find it difficult to answer/затрудняюсь ответить 3 – yes/да	1) 1-0,8% 2) 21-16,8% 3) 103-82,4%



Questionnaire for students

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11	Do you think that new approaches, such as blended learning and e-learning are able to improve the quality of knowledge acquisition? Повысит ли качество усвоения знаний новые приемы в обучении, такие как, например, комбинированное обучение (сочетание электронного обучения с очным обучением) и электронное обучение? 1 – no/нет 2 – in certain degree /в определенной степени 3 – yes/да	1) 3-2,4%
		2) 31-24,8%
		3) 91-72,8%
12	What do you think about the participation of your University in international projects along with the leading European universities? Как вы относитесь к участию вашего университета в международных проектах наряду с ведущими европейскими университетами? 1 – Positive/положительно 2 – Indifferent/безразлично 3 – Negative/отрицательно	1) 123-98.4%
		2) 2-1.6%
		3) 0
13	The project NICOPA is based on years of European experience. In this regard, do you consider it right to use it in the modernization of the teaching process? Проект NICOPA основан на многолетнем европейском опыте. В этой связи, считаете ли вы правильным использовать его при модернизации процесса обучения? 1 – no/нет 2 – in certain degree /в определенной степени 3 – yes/да	1) 4-3.2%
		2) 26-20.8%
		3) 95-76.0%
14	What do you think, will the acquisition of practical skills in Precision Agriculture increase your professional competence? Как вы считаете, повысит ли Вашу компетенцию как будущего специалиста ориентация учебного плана на приобретение практических навыков в области точного сельского хозяйства? 1 – no/нет 2 – yes/да 3 – in certain degree /в определенной степени	1) 0
		2) 112-89.6%
		3) 13-10.4%
15	How much are you interested in the opportunity to get a certificate that is equivalent to the ones of the leading universities? Насколько вы заинтересованы в возможности по окончании нашего университета получить диплом, эквивалентный дипломам ведущих европейских университетов? оцените от 1 до 5 1 – not interested/не заинтересован(а) 2 – I do not see in it necessity/не вижу в этом необходимость 3 – weakly interested / слабо заинтересован(а) 4 – interested/ заинтересован(а) 5 - Highly interested/сильно заинтересован(а)	1) 2-1.6%
		2) 11-8.8%
		3) 11-8.8%
		4) 31-24.8%
		5) 70-56%
16	How do you consider, whether the use of a new laboratory will increase your interest in Precision Agriculture? Как вы считаете, использование новой лаборатории усилит ли Ваш интерес к курсам в области точного сельского хозяйства? 1 – no/нет 2 – yes/да 3 – in certain degree /в определенной степени	1) 0
		2) 107-85.6%
		3) 18-14.4%
17	Are you interested to get more information about the purpose, objectives and the scope of the NICOPA project? Интересно ли Вам получить больше информации о цели, задачах, возможностях проекта NICOPA? 1 – no/нет 2 – I find it difficult to answer/затрудняюсь ответить 3 – yes/да	1) 0
		2) 9-7.2%
		3) 116-92.8%
18	Would you like to participate in the project? Хотели ли бы вы принять участие в проекте? 1 – yes/да 2 – no/нет 3 – superficially/поверхностно	1) 74-59.2%
		2) 9-7.2%
		3) 42-33.6%



Quality Assurance Plan

Quality group

Name, Surname	Occupation	Organization	Contact info (email)
Durdyev Orazmuhammet	Teacher of the department “Hydromelioration”	TAU	odurdyev@gmail.com
Shammedov Merdan	Deputy Dean, Department of Mechanization	TAU	sagitarious80@mail.ru
Shadurdyev Govshut	Teacher of the department “Hydromelioration”	TAU	Gowshudowgowshut@mail.ru
Pirlekov Merdan	Head of the Department of Horticulture	TAU	merdanpirlekov@gmail.com



PASENSO

Documentation for a PASO office:

Prepares the order of the rector on PAL and VCR audience creation at faculty of hydromelioration



Communication

The communication process:

On all questions of concerning performance of the project the continuous communication was carried out with KATU, TUB, TAI and TSACI
(Communication basically on the Internet and phone)





Thank you for you attention!



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