

**Kick-Off Meeting
Berlin
4-5 March 2019**

**New and Innovative
Courses for Precision
Agriculture**



**M. KOZYBAYEV NORTH
KAZAKHSTAN STATE UNIVERSITY**

**Koshekov Kairat,
Doctor of Technical Sciences**

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

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



Short History

The history of Manash Kozybayev North Kazakhstan State University is bound to the history of the Republic of Kazakhstan, its culture and education spheres. NKSU named after M. Kozybayev is one of the oldest educational institution in the Republic of Kazakhstan with 80 years of its existence.

The following stages can be observed in the history of this educational institution.

- The North Kazakhstan University is formed on June 2, 1994 on the basis of Petropavlovsk Pedagogical university named after K.D. Ushinskiy keeping traced history from 1937.
- On January 31, 2001, the North-Kazakhstan state university was given the status of a state university.
- On May 30, 2003, the North Kazakhstan state university was named after Academician Manash Kozybayev.
- The NKSU named after M.Kozybayev has passed the institutional accreditation on May 23, 2014 by the Independent agency for accreditation and rating and a state certification procedure successfully.



Statistics

Structure

7 faculties

27 Chairs

48 Bachelor programs

23 Master Programs

4 Doctor programs

Enrollment

Total: 5 483

3 486 students of full-time form of education, including the students learning in the state language 1 678

1 737 students of part-time form of education, including the students learning in the state language 503

914 students learning in DLT, including the students in the state language 302

235 Master's students

25 Doctoral students



Faculties

- HIGH SCHOOL OF MEDICINE
- AGROTECHNOLOGY FACULTY
- INSTITUTE OF LANGUAGE AND LITERATURE
- PEDAGOGICAL FACULTY
- FACULTY OF ENGINEERING AND DIGITAL TECHNOLOGY
- HISTORY, ECONOMICS AND LAW FACULTY
- FACULTY OF MATHEMATICS AND NATURAL SCIENCES
- FOUNDATION



Title of the Faculty Participating in the Project

Agrotechnology faculty

Chairs

- Agronomy and Forestry
- Food Security



DEAN
Shayakhmetova Altyn



Title of the Faculty Participating in the Project

Mathematics and natural sciences faculty

Chairs

- Biology
- Geography and Ecology
- Mathematics and Informatics
- Physics
- Chemistry and Chemical Technologies



DEAN
Pashkov Sergey



BA/MA Programs Offered by the Faculty

Faculty of Engineering and Digital Technology

BA Programs

- 5B071600 Instrument Engineering
- 5B071900 Radioengineering, Electronics and Telecommunications

MA Programs

- 6M071600 Instrument Engineering
- 6M071900 Radioengineering, Electronics and Telecommunications



Title of the Faculty Participating in the Project

Agrotechnology Faculty

BA Programs

- 5B080100 Agronomy
- 5B080700 Wood Resources and Forestry

MA Programs

- 6M080100 Agronomy



Title of the Faculty Participating in the Project

Mathematics and Natural Sciences Faculty

BA Programs

- 5B060400 Physics
- 5B061100 Physics and Astronomy

MA Programs

- 6M060400 Physics
- 6M061100 Physics and Astronomy



Curricula/Modules Studied in the BA/MA Programs to Upgrade

BA Programs

- **5B071600 Instrument Engineering:**
 1. Process Sensors;
 2. Intelligent Measuring Systems.
- **5B071900 Radioengineering, Electronics and Telecommunications:**
 1. Global Navigation Satellite Systems.
- **5B080100 Agronomy:**
 1. Precision Farming Systems;
 2. Sustainable Agricultural Land Management.
- **5B080700 Wood Resources and Forestry:**
 1. Technologies in Forestry.



MA Programs

- **6M071600 Instrument Engineering:**
 1. Elements of Artificial Intelligence in Technical Systems.



New Curricula/Modules for BA/MA Programs

BA Programs

- **5B071600 Instrument Engineering:**
 1. Start Up Initiatives for Future Engineers.
- **5B071900 Radioengineering, Electronics and Telecommunications:**
 1. Optimizing Computer Vision Algorithms and Real-time Implementations;
 2. Start Up Initiatives for Future Engineers.
- **5B060400 Physics and 5B061100 Physics and Astronomy:**
 1. Optimizing Computer Vision Algorithms and Real-time Implementations;
 2. Global Navigation Satellite Systems;
 3. Remote Sensing and Application of Earth and Environment related PA.



MA Programs

- **6M080100 Agronomy:**
 1. Using of SENTINEL 1-2-3 Imagery for Agricultural Field Monitoring;
 2. Yield Sensors for Precision Agriculture;
 3. Application of Precision Agriculture for Crops Growing.
- **6M060400 Physics and 6M061100 Physics and Astronomy:**
 1. Using of SENTINEL 1-2-3 Imagery for Agricultural Field Monitoring;
 2. Web Technologies (Agro SDI, Geo-portals, Geo-services, Geo-analytical systems);
 3. Basics of the Precision agriculture – characteristics, technologies, economic efficiency, optimal use of resources.



Work Group of the Project



- **Koshekov Kairat**, Doctor of Technical Sciences, Head Department of «Energy and Radioelectronics» - *the local project coordinator from NKSU.*



- **Shayakhmetova Altyn**, PhD, Dean of the Agrotechnology Faculty - *performs for the analysis, updating and development of training modules / programs in the specialties Agronomy and Wood Resources and Forestry.*



- **Savostin Alexey**, PhD, Associate Professor of the Department «Energy and Radioelectronics» - *performs for the analysis, updating and development of training modules / programs in the specialties Instrument Engineering and Radioengineering, Electronics and Telecommunications.*



Work Group of the Project



- **Sartin Sergey**, PhD, Head Department of «Physics» - *performs for the analysis, updating and development of training modules / programs in the specialties Physics and Physics and Astronomy.*



- **Ritter Dmitry**, PhD, Associate Professor of the Department «Energy and Radioelectronics» - *acceptance and commissioning of new equipment, creation of a new classroom / laboratory, internal and external quality assessment.*



- **Kushen Baurzhan**, Doctor of Agricultural Sciences, Professor of the Department «Agriculture and Forestry» - *equipment selection, scientific support of hardware implementation of precision farming technologies, analysis and processing of questionnaires and materials from stakeholders.*



Work Group of the Project



- **Omarov Zhomart**, general director of Shagala Agro LLP - *practical testing of project results.*



- **Akhmetov Murat**, Master, senior lecturer of the Department «Agronomy and forestry» - *project information dissemination.*

- **Mustafina Aigerima**, student - *outreach work with students.*



Work Plan of the University

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РЕСПУБЛИКИ КАЗАХСТАН
СЕВЕРО-КАЗАХСТАНСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ ИМ. М.КОЗЫБАЕВА

«УТВЕРЖДАЮ»
Ректор А.Т.Сам. М.Козыбаева
М.Смирнова
2019 г.

ПЛАН*
мероприятий по реализации проекта "New and Innovative Areas for Precision Agriculture (NICOPA)" на 2018-2021 годы

№	Мероприятия по плану	Ссылка на рабочий план Проекта	Сроки выполнения	Примечание
1	Разработка плана мероприятий по реализации проекта в СКГУ.	1.1 - 1.2	15.12.2018	Утверждение плана и формирование рабочей группы проекта с распределением обязанностей.
2	Составить перечень преподаваемых дисциплин для магистрантов и аспирантов в учебный период.	1.3	20.12.2018	Перечень
3	а) Разработать анкет для анализа существующих учебных планов/дисциплин (анкеты для преподавателей, студентов, выпускников, научных специалистов); * анкеты для заинтересованных в проекте академических партнеров: потенциальных работодателей, местные образовательные учреждения, промышленных предприятий, другие стороны, которые относятся к теме проекта б) Разработать график проведения анкетирования. в) Провести анкетирование различных целевых групп. г) Анализ проведенного анкетирования.	1.1	30.12.2018	а) Анкета сервиса должна полностью отразить уровень качества анализируемых учебных планов / дисциплин. Возможные вопросы для анкеты: название дисциплины, каков включены факультеты и кафедры, с какого года преподаются дисциплины, количество обучающихся студентов, соотношение практических / теоретических часов и учебной нагрузки студентов. 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 trainer position... Наличие, год внедрения и свежесть технических средств обучения, компьютеров, программных продуктов, учебной литературы, использование периодических

A project work plan for the NKSU has been developed and approved. For the planned activities are fully implemented.





Thank you for you attention!



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project coordinator from NKSU*
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