ACCESSIBILITY AND HARMONIZATION OF HIGHER EDUCATION IN CENTRAL ASIA THROUGH CURRICULUM MODERNIZATION AND DEVELOPMENT

Project № 561553-EPP-1-2015-1-BG-EPPKA2-CBHE-JP

ERASMUS+ Programme
KA2 - Capacity-building in the Field of Higher Education

Coordinated by Burgas Free University

WP1 Research
Dev. 1.1
App. 8.11 Institutional Report – SAI, Uzbekistan

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Language	English

INSTITUTIONAL SUMMARY REPORT – P11 SAI, Uzbekistan

A. General Information

COUNTRY: Uzbekistan
INSTITUTION (Full name and abbreviation): Samarkand Agricultural Institute
ADDRESS: 77, Mirzo Ulugbek street, Samarkand, Uzbekistan. 140103
FACULTIES (or other university units):

1. Faculty of Management in Agriculture *(name)*
2. Faculty of Agronomy
3. Faculty of Veterinary
4. Faculty of Agri-engineering and food processing technology
5. Department of Information technologies and higher mathematics

(Please, add as many rows as necessary.)

B. Information related to Engineering and Engineering Trade Subject Area

I. Academic Programs in Engineering and Engineering Trade Subject Area

Please, specify only Bachelor's and/or Master's Degree Programs which the university is expected to provide education in over the period of the Project (the next three academic years: 2015-18)[1], with indication of the Area (see table) where the academic program should be considered.

Engineering	**Area 1**
Engineering Trade	**Area 2**

Table 1. Description of Academic Programs in the field of Engineering and Engineering Trade

Area	Name of the Academic Program	Educational degree provided *(Bachelor, Master)*	Form of study *(part-time, full-time, distant education)*	Approximate total number of students	Total number of academic staff
1	Agricultural engineering	Bachelor	full-time	480	37
1	Agricultural	Master	full-time	12	

[1]If the university does not offer academic programs in Engineering and Engineering Trade subject area, please, in Table 1 fill in academic programs whose program's curriculum includes courses/subjects related to Engineering Sciences.

	engineering				
2	Food procurement and processing technology	Bachelor	full-time	301	16
2	Farm management	Bachelor	full-time	433	19

(Please, add as many rows as necessary.)

II. Current State of Education

Please, provide the following information for your university.

II.1. Quality of the Program's Curriculum and the Teaching Programs. Provide the information for each Bachelor Degree and Master Degree.

a) The indicators in this section refer to the Program's Curriculum. They aim to assess the consistency of the academic program with the requirements of the European higher education.

Share of core (required), Compulsory Specialized subjects, specialized subjects, common and optional subjects, and elective courses included in the Program's curriculum:

TYPE/AREA		AVERAGE NUMBER
Bachelor/Agricultural engineering	CORE	6
Bachelor/Agricultural engineering	COMPULSORY SPECIALIZED	15
Bachelor/Agricultural engineering	SPECIALIZED	5
Bachelor/Agricultural engineering	COMMON	14
Bachelor/Agricultural engineering	OPTIONAL	2
Bachelor/Agricultural engineering	ELECTIVE	2
Bachelor/Agricultural engineering	OTHER (SPECIFY)	3

TYPE/AREA		AVERAGE NUMBER
Bachelor/Food procurement and processing technology	CORE	6
Bachelor/Food procurement and processing technology	COMPULSORY SPECIALIZED	14
Bachelor/Food procurement and processing technology	SPECIALIZED	5

Bachelor/Food procurement and processing technology	COMMON	14
Bachelor/Food procurement and processing technology	OPTIONAL	4
Bachelor/Food procurement and processing technology	ELECTIVE	2
Bachelor/Food procurement and processing technology	OTHER (SPECIFY)	

TYPE/AREA		AVERAGE NUMBER
Bachelor/Farm management	CORE	7
Bachelor/Farm management	COMPULSORY SPECIALIZED	15
Bachelor/Farm management	SPECIALIZED	4
Bachelor/Farm management	COMMON	14
Bachelor/Farm management	OPTIONAL	2
Bachelor/Farm management	ELECTIVE	2
Bachelor/Farm management	OTHER (SPECIFY)	

TYPE/AREA		AVERAGE NUMBER
Master/Agricultural engineering	CORE	5
Master/Agricultural engineering	COMPULSORY SPECIALIZED	5
Master/Agricultural engineering	SPECIALIZED	
Master/Agricultural engineering	COMMON	
Master/Agricultural engineering	OPTIONAL	
Master/Agricultural engineering	ELECTIVE	3
Master/Agricultural engineering	OTHER (SPECIFY)	

(Repeat as many types of degree/areas needed)

b. Do you collect information on Program's curriculum, teaching programs, learning materials related to similar academic programs at European higher academic institutions (HEIs)?

Yes

Please, provide information about the ways to collect such data and give specific examples.
We collect curricula of EU and other HEI from websites of universities. Also, in frame of international projects such as Tempus, curriculums and syllabi are collected……

c. Share of the teaching staff with a doctoral degree/PhD (% of the full-time academic staff providing education at university or Faculty level) (average)
42%

d. Policy toward usage of modern approaches and methods of teaching

Please, give evidence on the usage of modern approaches and methods of teaching. Describe the policy for upgrading academic staff qualification. Mention specific actions taken such as seminars, workshops, training courses, etc. which aim to raise teachers' awareness of contemporary methods in higher education.

There is much being done in Uzbekistan to facilitate the dissemination of IT technologies and to raise the IT competency of the population. In this regard, on February 23rd, 2011, a Resolution of the President of the Republic of Uzbekistan on the measures for further development of the quality of libraries and information resource services, based on information and communication technologies for the period of 2011-2015, was adopted. This Resolution set the framework for formulating the typical regulations of electronic libraries. For each information resource center (IRC) of higher educational institutions (HEIs) of the Republic, a programme has been approved for the creation of: (1) an electronic collection of full-text informational-library resources; (2) an electronic catalogue; (3) a database of electronic textbooks, journals; and (4) a database of electronic information resources of the world's scientific and academic publishing houses.

Concurrently a Decree of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan from May 20th, 2011 has been issued, according to which all higher educational institutions in the country need to enhance the responsibility of teachers in creation of high-quality training materials in electronic format in order to support the e-education processes throughout the country.

The Law of the Republic of Uzbekistan on 'Informatization' adopted on December 11th, 2003, is the main instrument to support information literacy at the government level. Article 3 of this Law allows: (1) the creation of a unified information space and the grounds for the Republic to join the world information community; (2) the certification of engineering and operation process tools and resources imported into and created in the Republic of Uzbekistan; (3) the creation of a developed, functionally adequate and reliable information infrastructure; (4) the creation of conditions for intensive development of information literacy based on the prevention of excessive concentration and monopolization of the information sphere, transition from state-controlled, centralized methods of financing and management of information processes, to independent financing and management by private businesses; (5) the creation of conditions for attraction of funds from non-government sources for information literacy enhancement programs; (6) the encouragement of research and development and production aimed at development and introduction of advanced information technologies accessible for all users; and (7) the study and evaluation of the impact of information on the development of society.

Thus, the strategy of the reformation of the educational system of Uzbekistan focuses on the creation of electronic educational resources for e-learning of students at all educational levels (secondary and special secondary, higher and post-graduate).

The program of modernization of higher education in the Republic of Uzbekistan sets up important requirements for the academics. There is a growing need for the improvement of the traditional model of teaching by the way of introducing electronic education, introducing e-learning directly into the teaching process.

According to decree of President of Uzbekistan "On measures to further improve the system of retraining and advanced training for managers and teaching personnel of higher education institutions, In order to radically improve the quality of excellence through continuous growth of professional skills and qualifications of the teaching staff of universities,

the introduction of an improved system of regular refresher training in accordance with modern requirements, following activities are foreseen:

1. To consider the most important directions of further improving the system of retraining and professional guidance and teaching staff of the higher educational institutions:

increasing on a regular basis of pedagogical and professional level of professors and teaching staff of universities, in-depth study of legal norms, the latest advances in theory and applied scientific research, technological development and innovation of teaching disciplines, as well as modern methods of organization of educational process;

radical renewal of qualifications, curriculum, programs and methods of training and professional development of teaching staff of universities in view of the widespread introduction of modern high-performance and innovative educational technologies, foreign experience;

mastery of university teachers and active introduction in the educational process of modern innovative educational, information and communication technologies with a global network of Internet, multimedia and distance learning methods;

raising practical knowledge of teaching staff of universities and foreign language widely its use for the steady growth of their professional skills in teaching and research activities.

2. To accept the proposal of the Ministry of Higher and Secondary Special Education, Ministry of Finance of the Republic of Uzbekistan, of the Higher Attestation Commission under the Cabinet of Ministers and other ministries and agencies with jurisdiction in their higher education institutions, by definition, as the basis higher education institutions for the organization of retraining and advanced training guiding and teaching staff of universities in areas of retraining of 15 leading universities of the country, with these directions Scientific Council for doctoral theses, highly qualified scientific and pedagogical potential, modern, equipped with the necessary methodological, teaching and laboratory and information and communication means material -technical base.

Identify the main tasks and functions of the basis universities:

organization of permanent courses for retraining and further training of teaching staff and leading universities in the respective directions of retraining;

creation of the necessary educational, methodical and material base for training courses on a qualitatively high organizational and professional level;

wide attraction for training courses and refresher training leading teachers of the university and members of the Scientific Council for doctoral theses, as well as on a contractual basis of qualified teachers of other universities in the country and foreign specialists, teaching professionals and practitioners;

the formation of the necessary information and reference base in areas of retraining, development and implementation of training process of modern innovative educational, multimedia and information and communication technologies;

organization for students on courses for retraining and professional development of teaching practice with carrying out of public lectures and workshops, followed by discussion and critical analysis;

Take measures to empower non-resident students in the courses residences hostels universities for a period of retraining and advanced training.

To entrust the rectors of higher educational institutions, certain basic institutions of higher education for retraining and further training of teaching staff and leading universities, personal responsibility for the organization of training at a high quality level.

3. Set the order according to which:

management and teaching staff of higher educational institutions of the republic, regardless of subordination, are required on a regular basis, at least once every three years, undergo retraining and refresher training in the relevant areas on the permanent rate of the basis higher education institutions;

training courses and refresher training shall be made within two months of separation from work for special programs in the amount of 288 hours, developed on the basis of the updated Model structure of the refresher course curriculum guidelines and teaching staff of universities;

on completion of training course participants are subject to certification, ongoing certification commission created in each basic university headed by the rector of the university and chairman of the Scientific Council for the award of the degree of Doctor of Science in the amount of at least 7 persons from among leading scientists and experts in the relevant fields, members of the Scientific Council, a prominent specialist in the field of teaching work;

in the case of failure to guiding and teaching staff of universities to re-qualify, faculty members lose the right to practice teaching in higher educational institutions and the main place of work with an employment contract is terminated;

teaching staff who have successfully passed the certification at the end of training courses, will have a preferential right when passing the competition for vacant teaching positions at the appropriate direction;

for students trained on refresher courses and training in the Basic universities, for the entire period of study retained their positions on the main job and average salary.

Organising regular courses for retraining and further training of teaching staff and leading universities to start from September 1, 2015.

e. Existence of a Quality Assurance System at National level or International QAS followed. Please explain QAS, if any, to recognize degrees nationwide and follow up system, if any, to reaccredit degrees after being implemented for a given number of years.

The State Testing Centre (STC) which comes under the auspices of the Cabinet of Ministers of the Republic of Uzbekistan (established in May 1994) is authorised to undertake a review (state attestation procedure) of all educational establishments in Uzbekistan regardless of their status or type of ownership. Accreditation and state attestation of educational institutions is organised and conducted in accordance with the Regulation on State Accreditation of Educational Establishments in the Republic of Uzbekistan.

Accreditation of an educational institution is effected by the STC. Attestation is the prevailing method of state control aimed at assessing the educational establishment and deciding whether the content, level and quality of personnel training is in line with State Educational Standards.

State accreditation includes recognition of the educational establishment's activities' compliance with the criteria and requirements laid down in the State Educational Standards and the granting of the right to issue an educational certificate of the approved national format to the graduates of the establishment. Accreditation and state attestation of educational institutions is organised and conducted in accordance with the Regulation on State Accreditation of Educational Establishments in the Republic of Uzbekistan.

Accreditation of an educational institution is effected by the STC. Attestation is the prevailing method of state control aimed at assessing the educational establishment and deciding whether the content, level and quality of personnel training is in line with State Educational Standards.

State accreditation includes recognition of the educational establishment's activities' compliance with the criteria and requirements laid down in the State Educational Standards and the granting of the right to issue an educational certificate of the approved national format to the graduates of the establishment.

Attestation of educational establishments is organised and conducted by the STC. The educational establishment is subject to an attestation procedure every 5 years. The process includes comprehensive analysis of the educational establishment's activities over the previous three years broken down by types of education, with special attention paid to established criteria.

The procedures and outcomes of the quality assurance process have to be approved by the Cabinet of Ministers. After consideration and the approval by the Cabinet of Ministers the quality assurance report is made available to the university administration so that it can be discussed in the Academic Council to develop necessary measures.

The State Testing Centre is also responsible for accreditation/validation of all levels of education qualifications. International and bilateral agreements, State Educational Standards and normative documents are taken into consideration.

f. Share of new courses (subjects) which have been introduced in the Program's curricula for the last 3 years (% of the total number of courses/subjects in the Program's curriculum)

……16% (7 out of 43)…….

(Please, specify a number)

g. Usage of contemporary references

Please, specify the approximate average number per University/Faculty/Department according with the data used at your university, specify which one.

Share of core readings (references) issued over the last five (0-5) years (% of the total number of core readings)	Share of core readings (references) issued over the last ten (0 - 10) years (% of the total number of core readings)	Share of the digital references in e-format (% of the total number of references)
32%	70%	100% (all readings are scanned)

II.2. ICT facilities and ICT based education

II.2.a This section aims to shed light on the usage of ICT-based facilities and teaching methods as well as the digital competencies of the teaching staff.

Indicator	Value
Teaching e-platform accessible online to support general teaching activities	Yes MOODLE
On-line platform for non-presential education courses	No
ICT lab facilities for students and percentage of students that access to them	
Number of software products used for educational purposes	
Access to Wi-Fi at the university campus	Yes, in library
Average share of academic hours per course/subject requiring usage of ICT- based teaching methods (i.e. computers and software, multimedia devices)	60%
Average share of academic hours per course/subject held in a computer lab	46%
Average share of the teaching staff who regularly use ICT-based methods of teaching	60%
Type of e-learning devices used by teaching staff (i.e. personal computer, smartphones, tablets, etc.)	Personal computers, laptops, beamers, tablets

Devices used by students in classrooms (type of personal devices: i.e. laptop, smartphones, tablets, etc.)	Smartphones, laptops, tablets
E-learning materials (e-based content) based on e-platform (i.e. Moodle, Sakai, Caroline, etc.)	Please, specify type only if you use an e-platform (ie chat, blog…) MOODLE
Web based learning-MOOCs	No
Students evaluation methods	(Traditional exam, online tests, portfolio, one-minute questions, multiple choice tests, etc.) Traditional oral and written exams, multiple choice tests, presentations, projects.
Other non-traditional evaluation methods for transversal competences	

III Digital Framework

1 Is your university following a strategic plan for Digital implementation? YES/NO. Describe it in max 700 words.
In 1997, for the development of technology SAI computer network open and organized the test center. The center has developed a program of test questions and answers.
In 1997-2002 years in the computer center organized framework for the study of tests in many disciplines, as well as to conduct the certification tests for students of all faculties. May 23, 2001 in connection with the order of the Minister of Higher and Secondary Special Education Center was renamed "Center for Information Technology." The center now has two offices, "Information and technical support and the use of teaching and learning materials and software training."
The main objectives of the center;
- Technological equipment of operation of computers in the institute;
- Implementation of those. assistance during the operation of computers in the classroom;
-Implementation of control over the technical condition of computers and enriching them with modern materials;
- Provision support computers with new information;
- Ensuring that the local network of the Institute;
- Automation of the educational process;
- Enrichment program (ZIYO NET) to-date information;
- Obtaining and processing information via email from parent organizations;
- Timely provision of sending information to the appropriate authorities;
- The annual update of passports higher and secondary specialized education ministries;
- Create and supplement web site at the institute;
- Ensuring the work of students, faculty members and staff of the Institute of information on the Internet;
- Ensuring the effective use of computers in the classroom;

- Ensure the use of electronic versions of textbooks and manuals;
- Ensuring data security.
The Institute has more than 400 computers, most of which are mainly used in the classroom. Operates 13 computer classes and is working in the classroom. The Institute has 160 computers have a local connection with the students, graduate students, undergraduates, as well as faculty members.

2. Describe how your university develops its Digital Strategy in terms of Concerns and Key Actions during the last 2 years (i.e. training courses, sessions, workshops, financial assistance offered to academics for qualification upgrading, etc.):

	CONCERNS	**KEY ACTIONS**
Articulation by faculties, schools and CSUs of plans for technology use		
Student experience and support in ICT use	Improvement of ICT skills of students	240 hours of compulsory course for all BA programs "Informatics and ICT" Additional courses on ICT and computer use
Administrative Staff training and support in ICT use to improve the digital competence	Implementation of National program on e-governance	Implementation of intra and inter-organizational digital technologies. Compulsory number of interactive services by public organizations, including HEI.
Faculty Staff training and support in ICT use to improve the digital competence	Improvement of ICT skills of faculty members	Training courses on temporal basis on ICT competence and language for faculty and administrative staff
Library services. Research tools		
Technological support for assessment activities	Transparency of exams	Special computer rooms for multiple choice tests of midterm and final exams
MOOCs or online courses		
On-line services addressed to the students (class timetable, exam timetable, courses history, grades, digital library and etc.)		Class timetable, courses, downloadable reading materials, exam results, e-library

3. Describe the digital methodology used in your **Learning Environment, giving examples in different types of subjects related with the type of subjects described in B.1.**
You should include a small explanation with the following information:

- **Type of ICT methodology used: (i.e.** Blended learning, flipped learning, face-to-face learning, gamming learning, partnering learning, etc.)

- **Type of learning:** independent, collaborative, formally scheduled.
- Feedback: student, faculty and administrative staff
- **Digital facilities**: ie. Meetings, seminars, conferences, exhibitions, social and community activities

Learning Environment of Samarkand Agricultural Institute include traditional lectures, seminars, laboratory and practical classes. At lecture classes, traditional lectures with use ICT tools like computers, beamers are in use.
The curriculum is defined both at national and institutional levels. According to the Education Act, higher educational establishments are allowed to choose their own curricula, textbooks and methods of teaching. The educational process in higher educational institutions is carried out in line with the State Educational Standards and is regulated by the curricula, academic calendar and timetables.
Example of regular curricula (Farm management)

№	Name of subjects	Academic load (hours)								
		Total volume		Auditorial loading						Self-studying
		hours	%	total	lections	Practical training	Laboratory training	Seminars	Course work (project)	
1	2	3	4	5	6	7	8	9	10	11
	Humanitarian and social-economic subjects	**1704**	**22,7**	**1038**	**272**	**482**		**284**		**666**
1.01	History of Uzbekistan	116		58	28			30		58
1.02	Jurisprudence. Constitution of Uzbekistan	116		58	28			30		58
1.03	Philosophy (ethics, an aesthetics, logic)	148		96	48			48		52
1.04	Enlightenment bases	92		58	28			30		34
1.05	Culturology	56		38	18			20		18
1.06	Theory of economy	116		64	32			32		52
1.07	Sociology	56		38	18			20		18
1.08	Pedagogics. Psychology	120		52	26			26		68
1.09	National ideology	60		38	18			20		22
1.10	Politology	112		56	28			28		56
1.11	Russian	116		76		76				40
1.12	Foreign language	360		254		254				106
1.13	Physical training	236		152		152				84
2.00	**Mathematical and natural**	**1380**	**18,4**	**860**	**364**	**170**	**326**		**1ки**	**520**

	subjects									
2.01	Higher mathematics	120		76	34	42				44
2.02	Informatics, information technologies	240		152	76	38	38		ки	88
2.03	Physics and agrometeorology	180		114	48		66			66
2.04	Chemistry	240		152	48		104			88
2.05	Agricultural biotechnology and mikrobiology	150		90	36	54				60
2.06	Botany, biology and plant physiology	240		152	64		88			88
2.07	Ecology and environmental protection	120		72	36	20	16			48
2.08	Life safety	90		52	22	16	14			38
3.00	**The general profile subjects**	**3240**	**43,2**	**1848**	**846**	**642**	**360**		**2 ки**	**1380**
3.01	Agricultural production economics	210		126	54	72			ки	84
3.02	Book keeping and taxation in agriculture	270		144	72	72				96
3.03	Management and planning of investment processes in agriculture	270		144	72	72				96
3.04	Agricultural products quality and marketing	150		90	36	54				108
3.05	Agrarian reforms and food security	180		108	54	54				72
3.06	Farm diversification and management	180		96	38	58				84
3.07	Agriculture and melioration	270		148	68		80		ки	122
3.08	Soil sciences and agrochemestry	180		108	36		72			72
3.09	Integrated crop protection	270		144	72	72				126
3.10	Selection and seed-growing of agricultural crops	180		108	54	54				72
3.11	Plant and cotton growing	150		100	46	54			кл	50
3.12	Agricultural mechanization	210		126	54		72			84
3.13	Animal sciences	180		108	54		54			72
3.14	Sericulture	150		72	32		40			78
3.15	Storage, primary processing technology and standardization of agricultural products	150		82	40		42			68
	Elective subjects	240		144	64	80				96
4.00	**Special subjects**	**720**	**9,6**	**456**	**206**	**250**			2 ки, 2 кл	**264**
4.01	Organization of production and adminstration of farms	180		114	48	66			кл	66
4.02	Farm management	150		90	40	50			ки	60
4.03	Infrastructure and contracting in agriculture	150		100	46	54			кл	50

4.04	Fruit and vegetable growing	150		100	46	54			ки	50
	Elective subjects	90		52	26	26				38
5.00	**Extra subjects**	**450**	**6,0**	**250**	**80**	**170**				**200**
	Total	**7494**	**100**	**4452**	**1768**	**1714**	**686**	**284**	**2 кл, 6 ки**	**3030**

IV. Competitiveness of Education

The goal is to assess the competitiveness of your university and the academic program at a national, regional and EU-wide level as well as its conformity with the labor market requirements.

1. Do you receive a feedback from students – current and former ones – about the quality of education in the academic programs? Please answer at university level, Faculties or by areas described in Table 1, according with the characteristics and data of your institution giving information about the ways for collecting such information (i.e. questionnaires, surveys; regular meetings with graduates; alumni associations, etc.). Present specific documents, if applicable. Summarize the results.

Faculty of Farm management, in frame of Tempus SAMUz project has conducted a survey among students and employers on the qualification needs of graduates in the field of farm management and agricultural economics in a broader sense. The objective of the survey was to identify shortcomings in current curricula with regard to the professional content of existing study programmes as well as general key qualifications and skills – both from the perspectives of students/future graduates and representatives of the labour market.

The survey was organised as an online survey based at the server of Giessen University during the period January-February 2014. Students from the Uzbek partner HEIs of the project were invited to respond to the survey. For the labour market survey potential employers in the broader agricultural field have been contacted by email and linked to the online survey. The survey was anonymous.

The students' survey was questionnaire of 70 questions and sub-questions and was directed to Bachelor and Master students of their final study year of the programme of Farm Management or any related field.
Detailed results of the survey are attached as Annex 2. The students answered mainly positive about their existing study programme with the majority of respondents chosing the respective value parameter of much/very much (on a scale ranging from 1=not at all to 5=very much or very true). However, the middle value parameter of 3 has been chosen by a significant amount of students summing up between 15 – 35% depending on the question. This reflects room for improvement of study content and teaching forms.

Selected survey results:

Assessment of study programme and competences obtained	*1 not at all; not applicable*	*2*	*3*	*4*	*5 very much; very true*
Lecturers of my study programme are of high didactical expertise (n=152=100%)	0%	8%	23%	41%	15%
Supervision and guidance by lecturers was very good during my study period (n=152=100%)	1%	5%	21%	43%	18%
I have/had problems in following the subject matter during the courses (n=152=100%)	5%	13%	32%	26%	11%
I can/could choose from a multitude of course offers (n=152=100%)	13%	6%	25%	26%	17%

Technical equipment (presentation equipment, computer, copy machines, internet etc) is very good (n=152=100%)	3%	7%	23%	39%	16%
Subject-specific methodological knowledge was promoted during the study (n=143=100%)	1%	5%	35%	28%	13%
Ability to transfer knowledge (e.g. to apply existing knowledge to new problems) (n=143=100%)	1%	9%	25%	35%	13%
Mathematical principles of economics (e.g. production function; functions of supply and demand; profit function… and their constraints) (n=143=100%)	3%	10%	26%	32%	11%
Applied econometrics (e.g. probability theory; linear and multiple regression model; statistical tests; econometric analysis of supply, demand, price …) (n=143=100%)	13%	10%	25%	24%	12%
Looking back, would you choose the same study programme / specialization again? (n=139=100%)	14%	9%	15%	25%	17%

	yes	no
During the study programme I was able to work with practical / hands-on examples (n=175=100%)	59%	28%

2. Do you collect information from employers of your students about the quality of education and students' professional qualification and preparation? Please, give information about the ways for collecting such information (i.e. questionnaires, surveys; regular meetings with employers, employers' associations, labor market institutions, etc.). Present specific documents, if applicable. Summarize the results.

The labour market survey was questionnaire of 40 questions and sub-questions and was directed to potential employers of agricultural graduates with a study focus on management or economic issues. The survey has been answered by 75 respondents whereof 59 were complete and usable for the analysis. The majority of respondents were private companies (63%) in the field of agricultural production/ farming (54%) with a size of 11-20 workers (33%) and 21-50 workers (28%).

Selected survey results:

Most requested knowledge and skills of study graduates ranked by respondents (n =59; selected answers > 65% of value parameter 4 + 5 = much+very much)	*Value parameter 4+5*
Self-motivated	73%
Able to work in team/team player	74%
Critical thinking & analytical skills	69%
Processing and interpreting of numerical data	69%
Knowledge and understanding of business economics (e.g. theory of production; theory of costs; calculation of profitability)	71%
Knowledge and understanding of agricultural markets (e.g. what determines supply, demand, and prices of agricultural products; how do prices interact across products, time and space	70%

3. Student and teaching staff mobility per University/Faculty/Area described in table 1

Average number of students per year over the last 2 years who have studied abroad (excluding the EU countries)	40-50 students to Russia (Please, specify the total number of students and the countries which students prefer. Take into account students' mobility programs, students' exchange programs, research grants, etc.)
Average number of student per year over the last 2 years who have studied in the EU	…20-30 students mostly to Germany.. (Please, specify the total number and the EU countries which students prefer. Take into account students' mobility programs, students' exchange programs, research grants, etc.)
Average number of teachers per year over the last 2 years who have visited foreign academic institutions (excluding the EU countries) for the purposes of delivering lectures/seminars, conducting scientific research, project participation	……8 teachers to Russia, South Korea, Japan and India…….. (Please, specify the total number and the share in the full-time faculty staff and the most visited EU member states.)
Average number of teachers per year over the last 2 years who have visited academic institutions in the EU for the purposes of delivering lectures/seminars, conducting scientific research, project participation.	……22 teachers, mostly to Germany, Central Europe countries…….. (Please, specify the total number and the share in the full-time faculty staff and the most visited EU member states.)

4. Employability of graduates. (Please give answers by University/Faculty/Areas described in Table 1)

The next two indicators estimate the degree of qualification mismatch for your graduates. Please, provide data on:

- Share of graduates (% of the average total number of graduates per year) who over the last 5 years have started a job which require professional qualification and theoretical knowledge in the field of Engineering and Engineering Trade. These are students who work in accordance with their field of study/specialty (this indicator is related to the extent of horizontal qualification mismatch).

82%

- Share of graduates (% of the average total number of graduates per year) who over the last 5 years have taken working positions which require the same educational degree (i.e. bachelor or master) as that they possess. These are students who work in accordance with the educational degree acquired (this indicator is related to the extent of vertical qualification mismatch).

65%

(Please, provide an analysis of the results and discuss the reasons in case of low shares)

5. Education and training provided in a real-life working environment

5.1. Per areas described in table 1, please share the courses/subjects typo for which part or all classes are conducted in a real-life working environment (i.e. companies, banks, factories, etc.)

Branches of profile departments (Agricultural engineering, Food procurement and processing technology, Farm management) are organized at premises of industrial companies like "Agromir" (fruit and vegetable processing),

"Sampahtasanoat" (cotton procurement and marketing). Part of practical classes, in average, 10% of total contact hours are provided in a real life environment.
(Please, give a specific number and examples.)

5.2. The average number of academic hours per course/subject conducted in a real-life environment

8-10
(Please, give a specific number.)

5.3. Additional evidence on the practical orientation of the study and the practical training of students (i.e. internships during study, etc.).

16 weeks of internship after 2,4,6,8 semesters are foreseen by curricula. Internship after 2nd semester provided at experimental laboratories, after 4, 6, 8 semesters at companies of profile industry

6. University – Business links

Please, provide information on participation of specialists, experts, entrepreneurs, etc. in the educational process and/or curricula development, if any. Specify the average share of lectures/seminars delivered by them (% of total academic hours per course/subject.)

Specialists of profile industries (Engineering companies, food processing enterprises, farmers) providing limited number of classes as guest lecturers…….

7. Does your university study the current tendencies and requirements of the labor market?

(Please, provide specific information about the ways to collect labor market data. Describe records, databases, analysis you prepare, if any.)

Every year, under coordination of academic department, deans office and specialized departments collect demand data about content and number of specialties and directions. Collected data used for curriculum development and order for quota places to Ministry of Economy. …..

8. Does your university/faculty offer or plan to offer joint degree programs with partner universities?

(Please, provide general information about joint degree programs per area described in 1 with other universities in your home country or abroad, if any.)

NO

9. Please, discuss the Lifelong Learning (LLL) policy of your institution.
Continuity with and links between general secondary, secondary specialised, vocational and higher education are important aspects of higher education quality. The quality of higher education is assured by the State Educational Standards which set the minimum requirements for each educational level, describe the main features, structure, content and implementation of curricula, ensure the quality control of personnel training and set the compulsory (core) components (the list of academic subjects).
The curriculum is defined both at national and institutional levels. According to the Education Act, higher educational establishments are allowed to choose their own curricula, textbooks and methods of teaching. The educational process in higher educational institutions is carried out in line with the State Educational Standards and is regulated by the curricula, academic calendar and timetables.

10. Future teaching methodologies and their implementation

Thinking about future students, current learning strategies followed by many of them before entering university, and ICT technologies:
Which key competences, skills and practices do you think that will be needed at university level to enhance students learning experience? Explain briefly under faculty staff, student and stakeholders' point of view.

The higher education system in Uzbekistan is currently experiencing complex transformations associated with modifications within the system and outside it. An important feature of the present time is a significant turnaround from the population of highly specialized education in the formation of a wider, allows a person to easily adapt to rapidly changing technologies. This greatly increases the requirements for the process of training in educational institutions. During the preparation of specialized professionals, to educational institutions is even one major problem associated with the implementation of the National Program for Training: Bridging the gap morality, raising national consciousness of young citizens of the republic.
Objectives for the future: increasing and strengthening the intellectual and scientific potential of the nation, work on new discoveries and inventions, improving the structure of the academy for the development of the priority areas. Teaching staff of higher education institutions actively involved in solving problems of high technology. Navigate in science, knowledge, ideas, ability to theoretically prove their insolvency or viability. Innovative education model focused on the maximum development of creative abilities and create a strong motivation based on voluntarily chosen field, direction, sequence of education or the type of educational institution. Thus, the possibilities of the education system in Uzbekistan, the integration of science and industry for training highly competitive professionals, give an impetus to the development of society and the state in an ever increasing penetration and integration into the world community.