Tuning Central Asia
Guidelines and Reference Points

Tuning cahea

Towards a Central Asian Higher Education Area

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TuCAHEA

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Towards a Central Asian Higher Education Area

TuCAHEA is a Consortium of European and Central Asian partners that cooperate to build the foundations for a Central Asian Higher Education Area, using Tuning methodology to create tools for quality, transparency and visibility in a competence-based student-centred context. Supported by Tempus, it comprises 47 partners, including the Ministries responsible for Higher Education and 34 Universities in the 5 Central Asian countries; and eight European Universities with long-standing expertise in Tuning and ECTS.

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Summary

The TuCAHEA Consortium (www.tucahea.org), operating in the Tempus framework to contribute to the creation of a Central Asian Higher Education Area, publishes the results of the work of eight Subject Area Groups. The Groups have formulated Guidelines and Reference Points for the following disciplinary or thematic areas: Business and Management, Economics, Education, Engineering, Environmental Protection, History, Language, and Law.

These Guidelines are offered to the Higher Education community of Central Asia and to all other countries in the hope that they may be helpful in the design and delivery of Higher Education programmes.

Introduction

TuCAHEA

TuCAHEA is a large scale Structural Measures Tempus project, which aims to contribute to build a Central Asian Higher Education Area, compatible with the European Higher Education Area, but not identical to it. Rather TuCAHEA has provided a methodology and a meeting place for Central Asian academics and Ministries of Education to collaborate and to find useful ways forward to enhance the quality and the visibility of their higher education programmes at both national and regional level, taking into account their own cultural, economic and societal needs.

TuCAHEA is part of the world-wide Tuning Process, in which all continents and many countries are participating, in order to effect the shift towards modern student-centred higher education in a thoughtful way, using the knowledge and the insight of the University world in connection with governments, ministries and the world of enterprise.

TuCAHEA builds on and contributes to the work of similar minded people in the European Union, Latin America, the Russian Federation, the United States of America, China, Japan, and many other countries. This volume summarises a part of its results, and is being published on-line and in book form in Russian and in English.

General and Subject Specific Competences

A crucial first step in Tuning is the formulation of the most important General or Generic competences which, in the Tuning definition, means those that are common to all or most Subject Areas. In the very broad definition of Tuning, a competence is understood as what a learner, at the end of an educational process, knows, understands, and is able to do. (Annex 1)

In Tuning, each macro world region has created its own list of important competences, as have the Central Asian countries through TuCAHEA. This was accomplished at the beginning of the project. The partners in each of the five Central Asian countries discussed among themselves and with their colleagues which are most important in their own national context. The lists of each country were presented and discussed in Almaty, at the first Plenary meeting of the Consortium, in April 2013. Many communalities were identified, and the lists were merged, leading to an agreed list for all of Central Asia.

At the same time, the eight Subject Area Groups began to discuss similar lists of the most important competences for their own disciplines. These lists too were prepared in part before the first Plenary meeting and finalized when the Groups were finally able to meet and work together in person.

The nine resulting lists provided a starting point for the work of the Consortium: they can be found in the chapters that follow.

The Consultation

One principle of Tuning is that academics are indeed key players, even *the* key players, in higher education reform. They can, however, fulfill their function only if they work together and if they listen to the other important players, graduates, employers and of course, students. In the early summer of 2013 the 34 Central Asian Universities belonging to TuCAHEA undertook a very large scale 'consultation' with these four stakeholder groups to gather ideas about the relative importance and level of achievement of the competences under discussion.

This complex enterprise was not understood as a poll, or a survey, but as a way of understanding the perceptions that the various protagonists have about the role of higher education, its strengths, and the areas where improvement is advisable.

The consultation was carried out on-line, and when opportune, on paper and/or through focus groups. The results were all inserted into the on-line database, and in the end yielded a remarkable result: 20463 responses from the five countries and the eight subject areas. (Annex 2)

The Subject Area Groups

The large-scale consultation enabled the Subject Area Groups to continue their work, comforted and stimulated by access to the statistical data. It also brought the partners into direct contact with the other stakeholders, for example searching out where their graduates find employment, and entering into contact with their employers. It also provided – as has been the case in all countries where Tuning has been carried out – much food for reflection about which competences are actually useful for students in their professional careers, as well as for their personal lives and culture.

The Subject Area Groups discussed the essence of their area, found out what degree programmes are offered, and what occupations are common for graduates in each of the five countries. They consulted Tuning results from other countries when appropriate, but working in total autonomy. They then took further steps: identifying the key (most important) general or generic competences or transversal skills and the most important subject specific competences (those that characterize their area), and defining the competence levels that should be achieved for Bachelors, Masters, and PhDs. Then they were ready to look at the best approaches to learning, teaching and assessment. This gave them the chance to find out and share information about the many novel and innovative approaches that are already being used in their universities.

The final step was to define, for the three academic levels, descriptors in terms of Learning Outcomes for each Subject Area. This work was carried out by the eight Groups at the Plenary Conferences and Working Meetings, held in Almaty, twice in Bishkek, in Dushanbe and in Samarkand, and as much as possible by email between the meetings. Each Subject Area Group worked with an experienced European Tuning expert, whose role was that of consultant on the methodology when needed.

The present volume

This volume gives a synthesis of the results of the work of the Subject Area Groups. It consists of eight chapters, each written by one of the Groups according to a common procedure. To ensure transparency and comparability, the Subject Area Groups followed a common "Template", so that the logical steps in the process of designing the "Guidelines and Reference Points" would be clear, and could be written up in similar form (Annex 3).

The Groups followed the Template in somewhat different ways: academics from different disciplinary areas have their own ways of dealing with the tasks before them, and the richness of the results published here is dependent on their being able to describe their particular point of view and experience.

We believe that the TuCAHEA "Reference Points and Guidelines" will be of interest to all those interested in Higher Education in any part of the world, first of all but not only, in Central Asia. At the same time, we know that the work will continue and that these results will be extended and built on. Which is what we hope for.

Towards a CACRS and a CAQF?

A very significant part of the TuCAHEA project has been the discovery of what is already shared by Central Asian countries, the communalities and the differences. Here we refer not only to national or linguistic identity, or shared political and social trajectories. Rather the Subject Area Groups themselves have discovered many similarities and many differences in higher education structures and practices.

As in Tuning in other countries and continents, it is academics who actually teach in universities, with their hands-on experience and commitment, who can describe the educational process and suggest concrete improvements. The findings of the Subject Area Groups are particularly significant. Representatives of the Ministries responsible for Higher Education in the five countries also participated in the work. By mapping the present situation, the groups show where there is potential for collaborating more closely. At the same time, their work highlights the differences in the organization and academic culture of each country, as expressed in eight key Subject Areas.

In the course of the TuCAHEA project, there have been important developments in the policies of the participating countries: some connected with TuCAHEA itself, others independent responses to the needs and challenges of higher education systems. It now may be possible to create a Central Asian Credit Reference System, based on student workload, which will facilitate mobility between the TuACHEA. The partner countries will not need to make any changes in their present systems, but it will allow them to communicate better and present their higher education offer more clearly.

There is also a potential space for drafting an overarching Qualifications Framework for the Central Asian Higher Education Area. With the present

publication TuCAHEA can contribute: a Qualifications Framework, compatible with the European Framework, but distinct and based on competences and learning outcomes elaborated by representatives of Central Asian universities and Ministries of Education – a CAQF– can now be formulated.

Acknowledgements

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To all, thank you!

Katherine Isaacs
TuCAHEA Project Coordinator
Pisa, February 2016

BUSINESS AND MANAGEMEi8NT

1. Introduction

Tuning projects have been carried out in many parts of the world. The various projects differ from each other in terms of which subject areas are included.

From sources available on internet we can see that Business has already been the object of Tuning in European Union. From the material “Reference Points for the Design and Delivery of Degree Programs in Business” which was prepared in the Tuning Educational Structures in Europe project it can be seen that thorough research has been done in Europe in tuning the Business subject area. In Tuning Latin America there was a subject area called “Administración de Empresas” or Administration of Entreprises. These materials and experiences have proved highly useful in Tuning the subject area of Business in Central Asian Higher Education, helping to build competence-based and learner-centered education in the area.

We can state that Management is a broad process that takes place in all sectors of an economy and in organizations of all shapes and sizes, including both non profit and for profit organizations. Management is an organizational process that includes strategic planning, setting objectives, managing resources, deploying the human and financial means needed to achieve set objectives and, of course, measuring results and taking corrective actions when necessary.

It can be said that Business as a profession is one of the most universal. Graduates can work in any field, including the private sector, the public sector, manufacturing, education and science, etc. One of the main goals is an effective organization and management of a company’s activity. Specialists in different fields continue to develop their careers as managers or entrepreneurs and they often take MBA and DBA programmes.

We would like to highlight a specific experience within the Central Asian Area. Tuning methodology was applied to creating pilot educational programmes in Economics in 2005 thanks to the initiative of the Ministry of Education of Kyrgyzstan and it was implemented in 5 pilot Kyrgyz higher educational institutions as an experiment. The programme in Economics was formulated by a working group of 5 universities under the leadership of the European expert Katherine Isaacs.

In 2006 and 2007 a consortium of 2 European and 13 Kyrgyz universities was created thanks to the Bologna.kg and Bologna.kg2 Structural Measures Tempus Projects (TO12BO4: “Creation of national informational center of Bologna process”, and TO57AO6-KYR; “Broadening of centers of Bologna Process and support of Tuning teams of Kyrgyzstan”).

The expert on the Bologna process, professor of the University of Pisa (Italy), Katherine Isaacs coordinated the work. As a result of the project, 11 pilot educational programmes were formulated using Tuning methodology: Business Administration, Tourism, Architecture, Management, Agriculture, Informatics, Mathematics, Economics, Ecology, Engineering, and History.

Those pilot programmes became the foundation for creating the third generation of state standards, aimed at formulating the learning outcomes of graduates in terms of competences, which was initiated by the Ministry of Education and Science of the Kyrgyz Republic. Thus Tuning methodology was used to work out a model of state educational standards for Kyrgyzstan, to work out the state educational standards of the third generation for Bachelor programmes, and also to formulate temporary requirements for Master programmes of the third generation. 150 state educational standards for Bachelor programmes and about 100 temporary requirements for Master's programmes were made.

New state educational programmes include trials to make joint syllabi comparable and competitive, ensuring that they meet the requirements of students, the labour market and society.

We hope that these guidelines will be useful for the development of education in this subject area, and will contribute to regional prosperity.

2. Description of the subject area

The subject area of Business and Management has tight links with Marketing, Financial Management, Human Resource Management, Risk Management, Project Planning, and the like.

The experience of world higher education shows that the subject area of Business is one of the most attractive areas for students. Additionally, this area has an important role in society as it leads to improved allocation and more effective utilization of available resources, comprising the stages of planning, organizing, implementation and control. People holding degrees in this area can give an important contribution to national economic growth by creating new jobs and attracting foreign capital, leading to higher living standards.

Business is a broad subject area in the Social Sciences, allowing in-depth study in a range of specific fields, such as accountancy, finance, management and marketing. Businesses and other organizations are central pillars of modern globalized society; studying Business provides the ability to understand, explain and act in various types of organizational contexts.

Critical reflection and analytical problem-solving are important elements in Business courses and programmes. This subject area is also an interdisciplinary area that incorporates knowledge from Sociology, Political Science, Psychology, Mathematics, Statistics and Law. The Business subject area has close contacts with the latest research in the field of business, both nationally and internationally.

This subject area develops several important competences in students, including abilities needed for strategic planning, setting objectives, managing resources, deploying the human and financial assets needed to achieve objectives, measuring results, etc.

Business can be described as management in terms of a scientific discipline, i.e. it is a complex multi-faceted science based on scientific approaches, experience and

art. By effective implementation of business activities a person or a company will be able to achieve their goals, using labour, intelligence and considering the patterns and motivations of human behavior.

A scientific approach in this subject area is also necessary because each operative system has its own properties and parameters and to describe their interactions we need analysis, planning, forecasting, decision-making, etc. These processes require the use of the foundations of many sciences, such as economics, economics of organizations (enterprises), econometrics, mathematics, sociology, and psychology.

The main function of Business is satisfying the needs of a range of stakeholders. This typically involves making a profit (for the shareholders), creating valued products at a reasonable cost (for customers) and providing rewarding employment opportunities (for employees).

Activities related to Business can be classified as:

- General activities (goal setting, organizing, forecasting, planning, coordinating, managing, monitoring, recording and analysis);
- Specific activities (functional areas): production, marketing, research and development, human resources, finance, logistics, etc.

Educational programmes in Business are based on the knowledge, skills and experience to be acquired by students in the study of socio-economic disciplines (economics, finance, taxation, etc.), marketing, bases of entrepreneurship, and of humanities (psychology, sociology).

We could mention the following as the main function of managers:

- Ability to make and implement strategic, operational and tactical plans
- Skills of operational management
- Ability to ensure effective relations with stakeholders (state, high schools, consumers, suppliers)
- Skills of financial management
- Skills of marketing management and commerce
- Skills of human resources management
- Risk management
- Ability to cooperate with the internal and external environment (taking into account social, political, economic, legal, and cultural aspects)
- Ability to plan, organize, control and coordinate activity and available resources (human, financial, material, intellectual, and nonmaterial) for achieving a company's goals and tasks.

Business management consists of:

- General guidance (goal setting for an organization, organization, forecasting, planning, coordination, record, analysis, etc.);
- Concrete fields of guidance (human management, marketing, logistics, finances, investments);
- Necessary subjects: micro and macroeconomics, labour economics, social sciences.

In conclusion: Business programmes are part of the preparation of managers and economists. Furthermore, targeted education for the sphere of Business in different sectors of the economy is also possible at Master's and Doctorate level (MBA & DBA).

3. Degrees typically offered at the three cycle levels

The typical degrees offered within this subject area in Central Asia are Management as a first cycle with different specializations (international management, marketing management, financial management, production management, logistics/distribution management…) and a second cycle (Master with similar specializations).

There is also a third cycle (doctoral level) in some of the countries, for example in Kazakhstan and Tajikistan. In Kyrgyzstan, the Ministry of Education and Science has initiated a PhD programme, as an experiment, in 7 pilot universities from 2013 till 2018.

In the following paragraphs we will describe some specific characteristics in each country.

Kazakhstan

The basic structure in the higher education system of Kazakhstan is as follows:

- Units of measurement: Kazakh credits and ECTS credits.
- 45 student working hours per Kazakh credit, 25–30 student working hours per ECTS credit

- **First level** (Bachelor level): 240 ECTS. Students can specialize in Business with educational programmes in Management, Marketing, Finance, Economics, Account, Public Administration, International Management, Project Management, Management and regulation of labor, Tourism Management etc.
- **Second level** (Master level, MBA level): 60, 90 or 120 ECTS. Students can specialize in Business with educational programmes as Masters of Business Administration or as Masters in Management, Project Management, Innovation Management, Art Management, Marketing, Finance, Economics, Account, Public Administration, Administration & regulation of labor, Tourism Management and etc.
- **Third level** (PhD level, DBA level): early official documents included the regulation “60 ECTS or more”. Since 2012 Ministry documents use the rule “75 or more Kazakh credits” that equal more than 260 ECTS credits. Students can specialize in Business with educational programmes such as PhDs in Business Administration or DBAs (Doctor of Business Administration) in Management, Project Management, Innovation Management, Marketing,

Finance, Economics, Account, Public Administration, Administration and regulation of labour, Tourism Management, etc.

There is a system of recalculation of Kazakh credits into ECTS credits and back which is based on a “transfer coefficient”.

Recalculation of ECTS credits into Kazakh credits is done by dividing ECTS credits by the transfer coefficient. Recalculation of Kazakh credits into ECTS credits is done by multiplying by the transfer coefficient.

The value of the coefficient depends on the level of educational programmes:

1. BA: the range is from 1.5 to 1.8
2. MA: the range is from 2 to 2.4, for research; for education from 2.5 to 3
3. PhD: the range is from 3.5 to 4.2

The recalculation of credits from other types of educational work is carried out by analogy using the following transfer coefficient. Professional practice of:

- learning – the range is from 0.5 to 0.6
- pedagogical – the range is from 1 to 1.2
- production – the range is from 2.5 to 3
- research – the range is from 4 to 4.8
- research (experimental) – student research (doctoral) – the range is from 4 to 4.8
- final evaluation of students – the range is from 3.2 to 4.5

Kyrgyzstan:

In Kyrgyzstan the ECTS system is already used. The general structure of the higher education system of Kyrgyzstan is as follows:

- 30 student working hours per ECTS credit
- 1st cycle: Bachelor of Business Administration, Bachelor of Management (business management) – 240 ECTS
  - Possible specializations:
    - International Business
    - Financial management
    - Project management
    - Logistics
    - Management and financial accounting
- 2nd cycle: Master of Business Administration, Master of Management - 120 ECTS
  - Possible specializations:
    - International Business
    - Strategic management
    - Risk management
    - Financial management
    - Business assessment
    - Project management
    - Innovative management

        - Human resources management
        - Marketing management
        - International management
- 3rd cycle: PhD – Doctor of Philosophy in Business Administration, Doctor of Philosophy in Management (business management) in a pilot project of the Ministry of Education and Science of the Kyrgyz Republic since 2013 in 6 higher education institutions, 180 ECTS
    - Possible specializations:
        - International Business
        - Management

Tajikistan

Higher Education System reform in the Republic of Tajikistan is primarily aimed at provision of quality education and transition into the global educational area.

For this special purpose higher educational institutions gradually began implementing a credit system in the education process from September 2004 in accordance with the Decree # 698 of the Ministry of Education of Tajikistan. There was research conducted on credit accumulation and transfer systems of the United States (USCS), Great Britain (CATS) and Europe (ECTS) within the framework of the new reform.

The result was the decision that the most appropriate system for Tajikistan is the European Credit Transfer and Accumulating System (ECTS). It provides benefits such as counting visiting hours with professors and independent study hours under the guidance of academic staff.

The number of credits offered in the education programmes varies consequently from at least 256 credits for Bachelors, to 120 credits for Masters and 120 credits for Doctorates (PhD).

- *In the first cycle* (BA) there are 24 academic hours per credit including the following: 8 hours of lectures; 8 independent hours with an instructor; 8 independent hours without an instructor.
- *In the second cycle* (MA) there are 32 academic hours per credit including-8 hours of lecturing; 8 independent hours with an instructor; 16 independent hours without an instructor.
- *In the third cycle* (PhD) there are 40 academic hours per credit including 8 hours of lectures; 8 independent hours with an instructor; 24 independent hours without an instructor.

All Higher Education Institutions offer two types of cycles (Bachelors and Masters). The Ministry of Education launched Doctoral degrees (PhDs) in selected universities in 2014.

- First Cycle (Bachelor degree): Bachelor degrees in Business/Management include such majors as Tourism Management, Organizational Management, International Business, Economics and Management, Management of Enterprise, Banking, Commercial Law, Finance and Commerce and Expertise.

- Freshmen (first year students) take core knowledge courses: Philosophy, History, Cultures, Languages, Sociology, Psychology, Mathematics, Economics (micro and macro) and Information Technology.
- Sophomores and Juniors (Second and third year students) tend to take Operational Management, Logistics, Marketing, Statistics, Econometrics, Entrepreneurship.
- Seniors (fourth year students) take more specialized courses such as Tourism Management, Economics of Enterprise, Auditing, Economic Analysis, Banking, International Business and Commercial Law, Financial accounting. Also senior year students have compulsory internships and conduct research for their graduation thesis.

- Second Cycle (Master degree). Master programmes include MAs in humanities.
  - Research Methods, Econometrics, Contemporary Economics, Management, Financial Management, Human Resource Management, International Marketing, Internship, Master's thesis.

Turkmenistan

In May 2013 a new education law was issued. It introduces two levels of higher education: BA and MA along the lines of the Bologna process. Implementation of these programmes is not yet complete. The old system of higher education comprises 5 years for specialties; postgraduate (aspirantura) and doctoral studies.

The President of Turkmenistan issued the Resolution "On approval of provisions on public institutions of vocational education" (20.03.2014).

In particular, that document defines the structure and regulates the activities of state institutions of primary, secondary and higher education, and also considers two-cycle system of higher education (Bachelor's degree and Master's degree).

Among other measures it is planned to introduce learning foreign languages as a compulsory subject in vocational education curricula. In addition, it sets separately specified conditions of training in vocational schools for those residing in Turkmenistan, foreign citizens, and stateless persons.

Uzbekistan

The general structure of the higher education system of Uzbekistan consists of 3 cycles, and ECTS is not used. However, student workload is based on a fixed number of hours which can make it compatible with the ECTS system.

- 1st cycle: Bachelor's degree. Duration of study: 4 years. Possible specializations related to Business:
  - Economics
  - Management
  - Small business and private entrepreneurship
  - Marketing
  - Customs issues
  - Finance
  - Banking
  - Taxation
  - Accounting and audit
  - Economics of foreign countries
  - Economics and labor sociology
  - Personnel management
  - Management of the social sphere and human resources

- 2nd cycle: Master's degree. Possible specializations related to Business:
  - Economics, Microeconomics, Macroeconomics, Agricultural economics, Anti-monopoly management and competition development, Labor economics
  - Marketing (by industry)
  - Small business and private entrepreneurship
  - Marketing, Leasing, Logistics
  - Customs (by sector)
  - Public finance management, Corporate finance and stock markets, Investment management, International finance
  - Banking, Bank accounting and audit
  - Taxation
  - Book keeping, Audit, Budget accounting and control
  - Economics of foreign countries
  - World economics, Foreign economics activities
  - Personnel management,
  - Management of social sphere and human resources.

3rd cycle : PhD. Doctor of Philosophy in Economics.

The above information is summarized in the table that follows.

Table 1- Degrees typically offered in the Business and Management area in Central Asia

	Kazakhstan	Kyrgyzstan	Tajikistan	Turkmenistan	Uzbekistan
Unit of measurement	ECTS "Credits"	ECTS "Credits"	ECTS "Credits"	ECTS not used	ECTs not used
Hours per ECTS	25–30 student working hours per ECTS credit	30 students working hours per ECTS "credits"	Per credit: 24 academic hours in the first cycle; 32 in the second cycle and 40 in the third level	n/a	n/a
Levels	3 levels: Bachelor level, Master level/ MBA level PhD level/DBA level	3 levels: 1st cycle – Bachelor of Business Administration (Business Management) 2nd cycle – Master of Business Administration 3rd cycle – PhD – Doctor of Philosophy in Business Administration	2 levels: 1st - Bachelor level 2nd - Master level The Ministry of Education to launch Doctorate degrees (PhDs) in four selected universities (2015)	New two-cycle system of higher education (Bachelor's and Master's degree) implemented for some educational programmes in September 2014. Most continue to be according to the old system (specialties programme - 'aspirantura' programme - doctorate programme)	3 levels: 1st - Bachelor level 2nd - Master level 3rd - PhD or Doctoral level

	Kazakhstan	Kyrgyzstan	Tajikistan	Turkmenistan	Uzbekistan
First level (Bachelor level	240 ECTS	240 ECTS	At least 256 credits	BA - 4 years Specialities – 5 years	4 years
Second level (Master level, MBA level):	60, 90 or 120 ECTS	120 ECTS	120 credits for masters	MA - 2 years	2 years
Third level (PhD level, DBA level)	more than 260 ECTS	180 ECTS	120 credits for doctorates	Graduate programme (Aspirantura) 3 years + Doctorate 3 years	3 years
Business and Management subjects in other Degree programmes	Business and Management subjects offered in some degrees BA and MA level: Basic economic theory, Ecology & Sustainable development, Foundations of Law, Principles of Life Safety, International relations, Engineering, Transport, Tourism, Services	Management subjects usually offered in other fields: Public health, International law, Tourism, Information Technology, International relations, Economics, Public administration, Engineering, Pedagogy…	Management is taught in almost all degrees. For example Management for Engineering, Management for Transport... As for Business subject usually this subject is taught as Fundamentals of Business in all degrees.	Management offered in some degrees: Statistics, Accounting, Public Administration, Economic Safety, Tourism, Management for Engineering, Management for Transport, Librarianship, etc. More educational programme except for pedagogical.	Management taught in the fields of Economics and Engineering: e.g. Bachelor's degree in Finance and Credit, in Accounting, in Economics, in Technological Machines and Equipment, in Primary Cotton Processing, in Spinning, etc. Management is not taught in degrees relating to Natural Sciences and Humanities, such as Physics, Chemistry, Maths, Foreign languages, Philology, History, etc.

4. Typical occupations of graduates at the three cycle levels

There are many professional opportunities for graduates with a Business or Management Degree. We will describe the specific characteristics of those options in each country.

Kazakhstan

Graduates in Business work in private and public companies or research organizations, usually collecting and analyzing economic information that helps organizations to make decisions about pricing and marketing their products and services.

Graduates in Business carry out research on the economic environment and its impact on the functioning of private companies. They make economic projections relating to both internal and the external economy.

Graduates in Business can work in banks, insurance companies, manufacturing companies, consulting firms and other structures.

- Graduates of the first cycle degree can take less specialised positions in operations management/logistics, sales and marketing, organization, human resource management, finance and accounting, IT, various types of specialized analysis functions, usually at trainee level (sometimes in small local organizations).
- Graduates of second cycle degrees are usually able to obtain specialist positions in operations management/logistics; sales and marketing, organization; human resource management; finance and accounting; in IT; in strategic thinking and planning; initially in trainee positions or in structured graduate training programmes, normally in larger organizations (both national and international) offering good prospects of quick promotion to supervisory and management positions.
- Graduates with PhDs or other third cycle degrees in Business also have diverse employment opportunities: academic careers (mostly with institutions of higher education, sometimes with professional bodies); consultancy; industry/business/market research for government agencies, other public bodies, trade associations, and for large international organizations that require a continuous research function; and specialist occupations in a variety of economic sectors – particularly in knowledge-intensive roles requiring advanced levels of intellectual capacity.

Kyrgyzstan

Typical professions for Graduates in Business Administration in Kyrgyzstan are the following:

- Bachelor of Business Administration: possible positions on the level of structural departments of business companies, private entrepreneurship, or small businesses (family businesses for example); or in a variety of related

fields: marketing, managerial consulting, entrepreneurship, finances, logistics, post diploma education, academic occupations.

- Master of Business Administration: possible positions on the level of Managers (executive directors) of business companies, heads of large departments of companies in any field, scientific research and development.
- PhD: top manager of business companies, field directors, directors of international business companies.

Tajikistan

The majority of first cycle degree graduates hold positions as employees or trainees in marketing, accounting, finance, tourism and in other management departments.

Second cycle degree graduates hold high specialist positions or upper management positions in marketing, tourism, finance, accounting and other management departments. Such a degree enables the graduates to achieve gradual promotions to senior management positions with good career prospects.

Those holding third cycle degrees obtain academic positions in higher educational institutions. Some are employed as consultants or researchers in all types of sectors including private and public, conducting continuous research -- especially in knowledge intensive areas demanding advanced levels of intellectual capacity.

Turkmenistan

Since for now all graduates are specialists, they can work in different fields of the economy: marketing, managerial consulting, entrepreneurship, finances, logistics, post diploma education, and also academic occupations.

Graduates in Business work in public and private companies or research organizations, usually collecting and analyzing economic information to help organizations to make decisions about pricing and marketing their products and services.

Graduates in Business conduct research on the economic environment and its impact on the functioning of private companies. They make economic projections for both the internal and the external economy. They can work in banks, insurance companies, manufacturing companies, consulting firms and other structures.

Graduates of the first cycle degree can take junior positions in operations management/logistics, sales and marketing, organization, human resource management, finance and accounting, IT, various types of specialized analysis functions, usually at trainee level (sometimes in small local organizations).

At the moment we are writing this document, new laws are being defined in Turkmenistan. In the short term there will be changes in Business programmes.

Uzbekistan

All the statements about the other four countries hold true for Uzbekistan as well, and furthermore we may mention employment in educational institutions:

- Bachelor level graduates can work at colleges as teachers;
- Master level graduates can work at institutes or universities as junior teachers;
- Doctors' level graduates can work at institutes or universities as senior teachers.

5. The most relevant competences for the Subject Area

Tuning makes a distinction between learning outcomes and competences in order to distinguish the different roles of the most relevant players: academic staff and learners/students. Competences are developed during the process of learning by the student/learner.

According to the definition used in Tuning, competences are everything that the learner knows, understands and is able to do at the end of a process of learning. Attitude and 'mindset' are included in this very broad definition of 'competences'. The purpose of the educational process is to foster the development of the learner's competences.

In Tuning, a distinction is made between the competences that are directly connected to the disciplinary or thematic area of study, the "Subject Specific Competences" (SCs), and those that are important in many or all areas of study. These are the "General (or 'Generic') Competences" in Tuning (GCs), and are similar to what are often called 'transversal skills', that is abilities that are useful across many or all subject areas.

The first step in Tuning involves developing an awareness of the importance of the general competences in the educational process. Traditionally universities have concentrated on the transfer of knowledge specific to the area of study, and the formation of general competences has been left largely to chance.

In order to develop awareness of the importance of the general competences, Tuners from each Central Asian country developed lists of important competences, and carried out consultations on their relative importance and on the degree to which they are currently developed by universities. The consultations took place with employers, students, graduates and academics.

5.1. General competences

In accordance with the current Tuning methodology members of each subject groups of Central Asian country examined and discussed lists of general competences, which had been prepared in other countries (Europe, Latin America, Africa and Russia).

During the discussions and selection of significant competences, working group members proceeded from current situation of development higher education in their country, the role of higher education institutions in society, and the

possibilities of higher education institutions to develop moral, spiritual and ethical values among students.

Thereby, each country formulated its own list of significant general competences. The list of Kazakhstan included 24 key general competences, Tajikistan 30, Kyrgyzstan 17, Uzbekistan 28, and Turkmenistan 23.

At the regional conference in Almaty, Kazakhstan, held in April 2013, representatives of each Central Asian country considered each general competence, in Russian and English, and eventually developed of an agreed harmonised list of general competences for Central Asia.

Here is the final list of 30 general competences for Central Asia:

Code	Competence
GC1	Ability to analyze and synthesize
GC2	Ability to use logical and critical thinking for solving problems
GC3	Ability to model, design and forecast
GC4	Ability to carry out research applying appropriate methods
GC5	Ability to take initiatives and entrepreneurship
GC6	Ability to innovate
GC7	Ability to develop general knowledge
GC8	Ability to learn including autonomous learning
GC9	Ability to communicate interactively and receive feedback
GC10	Knowledge of the professional field
GC11	Ability to communicate in multicultural context
GC12	Ability to communicate in official state, Russian and foreign languages
GC13	Ability to lead people and work in a team
GC14	Ability to manage information
GC15	Ability to use information and communication technologies
GC16	Social responsibility
GC17	Ability to follow a healthy lifestyle
GC18	Ecological and environmental responsibility
GC19	Knowledge of the laws
GC20	Ability to prevent and resolve conflicts
GC21	Patriotism and preservation of own cultural values
GC22	Tolerance and respect for others
GC23	Commitment to quality results
GC24	Flexibility
GC25	Ability to apply knowledge in practice
GC26	Orientation toward the needs of the user
GC27	Ability to work autonomously
GC28	Ability to adapt to change
GC29	Ability to make decisions
GC30	Time management

Consultations with stakeholder on the importance and the level of achievement of the key General competences and those specific to each Subject area were

conducted. The consultation included relevant numbers of students and academic staff, graduates and employers. Respondents had to rate the 30 General competences and the 16 Business Competences on a scale of 1 - 4 as to importance and level of achievemet (1 = not important; 2 = important; 3 = very important; 4 = strong)

- 1411 respondents from the Business area participated in the consultation on general competences: 682 students (48,3%), 434 academics (30,7%), 172 graduates (12,2%), and 123 employers (8,8%).
- 1430 respondents from the Business area participated in the consultation on the Subject Specific competences: 676 students (42,2%), 462 academics (32,3%), 169 graduates (11,8%), and 123 employers (8,6%).
-

On the basis of the results obtained from the stakeholders and discussion in the subject area group (SAG) of the project, the following 12 general competences were identified as the most important for Business:

Table 2 - General Competences most important in Business and Management in Central Asia

Code	General competences
1.	Ability to use logical and critical thinking
2.	Ability to take initiatives and entrepreneurship
3.	Ability to learn including autonomous learning
4.	Ability to communicate in official state, Russian and foreign languages
5.	Ability to lead people and work in a team
6.	Ability to use informational and communicational technologies
7.	Ability to apply knowledge in practice
8.	Orientation towards the needs of the user
9.	Ability to adapt to change
10.	Time management
11.	Commitment to quality results
12.	Social responsibility

5.2. Subject specific competences

Before the meeting in Almaty, each CA country analyzed educational programmes, professional standards, and other regulatory documents, and consultations were held with experts and representatives of the business community with the aim of formulating the key Subject Specific competences for Business.

The following list was formulated as a basis for the consultation with the Business stakeholders (employers, alumni, students, academics):

Code	Competences
SC1	Ability to develop and implement a strategic, operational and tactical business plan
SC2	Monitoring, controlling and reporting skills
SC3	Self-management
SC4	Entrepreneurship and innovation skills
SC5	Conflict management skills
SC6	Risk management skills
SC7	Ability to use IT effectively for business
SC8	Ability to maintain effective relationships with stakeholders (government, institutions, customers, suppliers…)
SC9	Financial management skills (fundraising; investment projects; accounting…)
SC10	Marketing management skills (marketing research; marketing planning…)
SC11	Human resources management skills (recruiting, motivating, retributing…)
SC12	Commercial abilities
SC13	Ability to design manufacturing processes
SC14	Ability to manage logistic processes
SC15	Consulting skills
SC16	Ability to interact in internal and external environments (taking into account social, political, economic, legal, cultural aspects)

On the basis of the results of the consultation, discussion in the SAG, and grouping together of some of the original competences, the following 8 Specific competences were identified as being the most important for Business and Management:

Table 3 - Most important Subject Specific Competences in Business and Management in Central Asia

Subject specific competences
1. Ability to develop and implement strategic, operational and tactical business plan
2. Process management skills
3. Ability to maintain effective relationship with stakeholders (government, institutions, customers, suppliers, etc.)
4. Financial management skills
5. Marketing management and commercial skills
6. Human resources management skills
7. Risk management skills
8. Ability to interact in internal and external environments (taking into account social, political, economic, legal, cultural aspects)

Table 4- A helpful interpretation of the Specific Competences important in Business and Management in Central Asia

Code	Competences	Interpretation
SC1	Ability to develop and implement a strategic, operational and tactical business plan	Ability to identify, pose and resolve problems Ability to analyze and use different sources of information to develop a business plan Ability to identify internal strengths and weaknesses of an organization Capacity to provide company and projects with strategy recommendations using relevant tools Ability to manage resources according to planned objectives and actions
SC2	Process management skills	Ability to focus on results Capacity to identify, investigate and use up-to-date "web" ICT tools Ability to provide value chain with supply chain sustainable processes support Knowledge and understanding of the subject area and understanding of the profession
SC3	Ability to maintain an effective relationship with stakeholders (government, institutions, customers, suppliers…)	Ability to assess the impact of stakeholders on the company Ability to Identify the objectives that must be achieved in a relationship with each of stakeholders, as well as factors affecting achievement of the objectives and possible risks Ability to identify opportunities for mutually beneficial cooperation Ability to determine the most effective methods of interaction with stakeholders
SC4	Financial management skills	Ability to analyze and synthesize financial data necessary for management decisions Ability to use the ideas, views and models of financial management Ability to identify and select the necessary financial information in a particular direction - information management skills Ability to develop strategic financial plans for the development of organization
SC5	Marketing management and commercial skills	Ability to identify the functional areas of an organization and their relations (i.e. purchasing, production, logistics, marketing, finance, human resources)
SC6	Human resources management skills	Ability to find the organizational and managerial solutions and willingness to take responsibility for them Ability to analyze social problems and processes Ability to implement business communication: public speaking, negotiations, meetings, business

		correspondence, electronic communication Ability to use the basic theories of motivation, leadership and power management tasks Ability to organize group work effectively based on knowledge of the team building principles
SC7	Risk management skills	Ability to use modern methods of financial management for solutions to strategic and tactical problems Ability to use quantitative and qualitative methods for risk management Ability to use methods of economic analysis of organization in the changing market environment
SC8	Ability to interact in internal and external environments (taking into account social, political, economic, legal, cultural aspects)	Capacity to Identify and analyze the impact of macro- and micro economic elements on business organizations (i.e. financial and monetary systems, internal markets) Capacity to Identify and analyze the constitutional characteristics of an organization (i.e. goals and objectives, ownership, size, structure) Capacity to use the respective instruments for business environment analysis (i.e. industry analysis, market analysis, PESTL) Capacity to identify criteria according to which an enterprise is defined and link the results with the analysis of the environment to identify prospects (i.e. SWOT, internal and external value chain)

In conclusion, the list of general and specific competences a student of Business and Management should develop is the following:

Table 5 - Key General and Specific Competences for Business and Management in Central Asia

General competences		Subject specific competences	
GC1	Ability to use logical and critical thinking	SC1	Ability to develop and implement strategic, operational and tactical business plan
GC2	Ability to take initiatives and entrepreneurship	SC2	Process management skills
GC3	Ability to learn including autonomous learning	SC3	Ability to maintain effective relationship with stakeholders (government, institutions, customers, suppliers, etc.)
GC4	Ability to communicate in official state, Russian and foreign languages	SC4	Financial management skills
GC5	Ability to lead people and work in a team	SC5	Marketing management and commercial skills
GC6	Ability to use informational and communicational technologies	SC6	Human resources management skills
GC7	Ability to apply knowledge in practice	SC7	Risk management skills
GC8	Orientation towards the needs of the user	SC8	Ability to interact in internal and external environments (taking into

GC9 Ability to adapt to change GC10 Time management GC11 Commitment to quality results GC12 Social responsibility	account social, political, economic, legal, cultural aspects)

5.3. Meta-profile

A meta-profile reflects the structure and interrelation of competences that characterize a particular subject area. Meta-profiles are used for reference, depict mental models and should demonstrate the variety of possible and existing degree profiles within a particular subject area.

Meta-profiles are determined by analyzing stakeholder-consultation results through re-categorizing the competence list. Such re-categorization can be done differently in different subject areas and should reflect the subject area's unique characteristics. The following sections provide the bases for constructing such a profile for the Business and Management Area.

6. Cycle level descriptors (with reference to Qualifications Frameworks) in terms of competences

We should formulate the set of learning outcomes of each cycle in terms of competences. Learning outcomes should be formulated at "programme level" and also on the level of individual course units or modules. The learning outcomes of the individual units add to the overall learning outcomes of the programme.

We can add that competences are always developed in a progressive way. This means that they are formed in a number of course units or modules at different stages of the programme. Whenever we are designing a degree programme we must decide in which unit a particular competences has to be formed.

We present generalized description of learning outcomes for each level within our subject area.

6.1. First Cycle (Bachelor's) degree

First cycle graduates

Bachelor degrees in Business Administration can give a general overview of the main aspects of organizational missions, structures and processes. Core knowledge topics include strategic organization, planning and coordination of management and the formation of market or firm strategy; development through improving organizational activities of all units in volume including planning, forecasting, cost management and logistics procurement, logistics, marketing. Support functions such as organization, human resource management, finance and accounting and general management are covered.

Added to these business–specific courses, modules in complementary subjects such as economics (micro and macro) and law are widely found.

Instrumental skills courses, including quantitative methods (mathematics, statistics, marketing research) and Information Technology (IT) also feature prominently, though these are increasingly integrated into other courses.

Additional courses in developing competences in personnel organization and communication skills – such as courses in language, and modeling processes**.**

To conclude study programmes it is common to require a project or thesis for demonstrating and documenting the ability to integrate theory and practice and solve problems across different Business subject areas.

First cycle:

A Bachelor of Business Management should have acquired and be able to show knowledge and understanding and skills on the level of structural departments of business companies, private entrepreneurship and small businesses (family businesses). This means:

- To know and understand the goals of business organizations and their character;
- To understand the structure, culture and role of business organizations;
- To analyze the interaction between the organization and its environment;
- To develop leadership skills and behavior;
- To know and apply the main concepts and issues related to management of human, financial resources, and marketing issues;
- To use knowledge for studying management in a broad sense;
- To find out and assess critically different point of views regarding management issues;
- To comprehend critically, to assess and to apply own knowledge in life;
- To use and adapt business knowledge and skills to different organizations, environments and contexts and so on;
- To find and interpret information, implementing tasks of analysis and assessment.

These competences are shown in the following Table 6, divided into the categories of Knowledge, Skills and Levels of autonomy and responsibility. The numbers in brackets are related to the key general (GC) and specific (SC) competences discussed above (in sections 5.1 and 5.2) and listed in Table 5). For example, if the information in brackets is SC4, this means that the idea is related to the Specific Competence number 4, that is, “Financial management skills”.

Table 6- Bachelor level Business and Management in Central Asia

Knowledge	Skills	Level of autonomy and responsibility
Know:	**Be able to:**	**Be able to:**
Basic methods of thinking (GC1)	Use basic logical and critical thinking (GC1)	Work in team level (GC5)
Different fields of an organization (GC2)	Learn and learn autonomously (GC3)	Adapt to change (GC9)
Principles and types of entrepreneurship (GC2)	Communicate in official language, Russian and foreign languages at a basic professional level (GC4)	Effect personal time management (GC10)
Principles of team work (GC5)	Use IT and Communication Technology in a professional area (GC6)	Show commitment to quality results at a personal level (GC11)
IT and Communication Technology (GC6)	Apply knowledge in practice (GC7)	Display personal social responsibility (GC12)
Consumer behaviour (GC8)	Identify needs of big consumer segments (GC8)	Develop and implement an operational and tactical business plan (SC1)
Principles, models, mechanisms and tools for Business Planning (SC1)	Take part in developing a business plan (SC1)	Take responsibility for managing professional development of individual and groups (SC6)
Basic concepts of process management (SC2)	Identify and use IT tools (SC2)	Manage technical or professional activities in business areas (SC1-SC8)
Principles of relationships among different stakeholders and the impact of them on company development (SC3, SC8)	Maintain effective relationship with customers and suppliers (SC3)	
Basic concepts of Finance (SC4)	Analyze financial data (SC4)	
IT and programmes focus on Finance (SC4)	Fill out financial documents (SC4)	
Basic concepts of Marketing Management (SC5)	Use IT and programmes focussed on Finance (SC4)	
Basic theories and models of motivation, leadership and personnel management (SC6)	Use commercial skills (SC5)	
Qualitative and quantitative basic methods for risk management (SC7)	Develop a basic marketing plan (SC5)	
Principles of macroeconomics and microeconomics (SC8)	Use basic theories and models of motivation, leadership and personnel management (SC6)	
	Take into account social, political, economic, legal, cultural and other elements while analyzing a company´s development (SC8)	

6.2. Second cycle (Master's) degree

Those awarded a Master's degree must have fundamental academic and professional qualifications and command of modern information technology, including acquisition methods, processing and storage of scientific data to be able to set and solve modern scientific and practical problems, plan and conduct scientific research and experimental studies on the selected profession, teach at higher educational institutions, successfully conduct research and management.

In the last years of a second cycle programme there are generally included projects and a thesis to develop, demonstrate, and document the ability to integrate theory and practice and solve problems across different business subject areas.

In addition to second cycle programmes which build on business content at the first level, and which are followed immediately after bachelor studies, two other forms of second-cycle business programmes exist:

- MBA: MBAs, aim at candidates from any disciplinary background with several year experience in a business organization, and pre-experience MBAs, which are mostly aimed at first-cycle business graduates aiming for accelerated promotion in a business career.
- MA/MSc: These are designed as a type of 'conversion course' for graduates from non-business disciplines – such as the humanities, engineering and science. They are sometimes referred to as graduate courses – in the sense that those admitted need to be graduates. Students may join such programmes immediately after graduating from the bachelor cycle or some years later. They offer an condensed but intensive curriculum consisting of core subjects commonly found in bachelor programmes, possibly in combination with a master-level specialization in a particular field

Second cycle:

Master of Business Administration students should be able to show their ability to:

- understand leading theories, concepts and models of business;
- manage resources (financial and human) and projects;
- analyze and compare possible options, choosing the relevant actions;
- assess opportunities and threats;
- work effectively in teams;
- plan and manage time effectively;
- find and use information effectively;
- carry out independent research;
- analyze current situation of an organization;
- work autonomously and independently.

These competences are presented in Table 7, distributed and articulated under the categories of Knowledge, Skills and Levels of autonomy and responsibility. Again the numbers in brackets refer to the key competence list given above, in Table 5.

Table 7- Master level Business and Management in Central Asia

Knowledge	Skills	Autonomy and responsibility
Know: Advanced methods of critical thinking (GC1) Methods and procedures of benchmarking (GC2) Advanced concepts to improve process management (SC2) Effective methods of interaction with stakeholders (SC3) Advanced concepts of relationships among different stakeholders and their impact on company competitiveness (SC3) Advanced concepts of Financial management (SC4) Modern IT and programmes focus on Finance (SC4) New methods and IT marketing tools (SC5) Advanced theories of human resources management (S6) Qualitative and quantitative advance methods for risk management (S7) Advanced macroeconomics and microeconomics (S8)	**Be able to:** Use advanced logical and critical thinking to generate ideas in business areas (GC1 and SC1-SC8) Use benchmarking (GC2) Learn and teach in a team (GC3) Communicate in official language, Russian and foreign languages at an advance professional level (GC4) Communicate conclusions to specialist and non-specialists (GC6) Apply knowledge in practice (GC7) Identify needs of specific customer segments (GC8) Create and implement a business plan (SC1) Plan a strategic project (SC1) Provide additional value to the process (SC2) Improve sustainability (SC2) Maintain effective relationship with specific customers and other institutions on an international level (SC3) Analyze and synthesize financial data for management decisions (SC4) Develop strategic financial plans for the development of organizations (SC4) Use and develop IT programmes focus on Finance (SC4) Develop a marketing plan in an international level (SC5) Design a plan to select, promote, define, motivate and develop human resources to improve company results (SC6) Effectively organize group based on knowledge of the team building principles (SC6) Use modern methods of financial management to solve strategic and tactical problems (SC7) Use mathematical models for improving a company´s results (SC1- SC8) Use advanced instruments for business environment analysis for improving a company´s results (SC8)	**Be able to:** Take initiatives and entrepreneurship (GC2) Make decisions after benchmarking processes (GC2) Lead a team (GC5) Adapt to new or unfamiliar environments within broader (or multidisciplinary) contexts (GC9) Achieve time management of a team (GC10) Show commitment to quality results at a team level (GC11) Take social and ethical responsibility (GC12) Take responsibility for contributing to professional development of a team (SC6)

6.3. Third cycle (Doctoral) degree

PhD graduates should possess all the previous competences plus the ability to forecast and make mathematical models to govern structures and processes.

Table 8- Doctorate level Business and Management in Central Asia*

Knowledge	Skills	Level of autonomy
Know: Non-traditional methods of thinking (G1) Scientific knowledge and methodology of process management (S2) Multidisciplinary theories related to stakeholders relationships (S3) Innovation on strategic financial management (S4) Theories to create new marketing approaches (S5) New scientific approaches related to human resources (S6) Multidisciplinary methods of scientific research in the context of globalization and internationalization (S1-S8)	**Be able to:** Use lateral thinking to generate knowledge in business areas (G1 and S1-S8) Learn at a deep level from non-evident and complicated resources (G3) Communicate in official language, Russian and foreign languages at scientific research level (G4) Communicate with their peers, the larger community and with society about one's areas of expertise (G6) Apply knowledge in practice (G7) Identify explicit and implicit needs of consumer segments (G8) Manage risks when creating and implementing a research projects through critical analysis (S1) Manage processes in non-ordinary conditions (S2) Manage processes in a flexible system (S2) Maintain effective relationship with government and other institutions on an international level (S3) Develop new strategic financial plans (S4) Develop a marketing plan in an international level with a multidisciplinary approach (S5) Use methods of multidisciplinary analysis on different sectors and organizations in a changing market environment (S7) Conduct theoretical and experimental research and apply risk management in these processes (S7) Use mathematical models for improving the national economy (S8)	**Be able to:** Create new methods and criteria for assessment and developing entrepreneurship (G2) Organize a team and be responsible for the achievements of the team results (G5) Adapt to change being proactive and managing risks (G9) Manage research time (G10) Manage time at an organizational level (G10) Implement management quality assurance (G11) Promote, within research and professional contexts, ethical, social and cultural responsibility (G12) Implement leadership management (S6) Demonstrate sustained commitment to the development of the environment (S8) Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes in business areas (S1-S8)

*Numbers in brackets are again related to the list of key general (GC) and specific (SC) competences discussed above (in sections 5.1 and 5.2) and listed in Table 5.

7. Approaches to learning, teaching and assessment

Teaching is not the same as learning. Learning is the process of acquiring new knowledge or modifying and embedding of existing knowledge, behaviours, skills, value orientations or preferences. Learning may also include the synthesis of different types of information. Learning is not forcing; it is carried out through environmental context. Learning is not achieved at once, it is not a "one-time action"; learning relies on what we already know and is based on this foundation. In this context, learning can be considered as a process, which is different from simple collection of factual and procedural knowledge. Learning leads to changes in personality, and these changes are relatively permanent and long-lasting

Teaching is the systematic guidance over the educational and cognitive activities of a student carried out by a teacher. Teaching comprises the determination of educational content, its volume, techniques and methods; the creation of adequate conditions for the acquisition of the educational content; and the control over the quality of the acquisition of the educational content.

Finally, assessment of the quality of student`s work includes on-going monitoring of progress, intermediate and final evaluation.

7.1. What methods are used normally in each country and each institution today?

Nowadays, many varieties of teaching methods are used at Higher Educational Institutions in each Central Asian country. They can be listed as follows:

Lectures, guest lectures, seminars, workshops, webinars, practical courses, laboratory work and studies, field work (practice in organization), independent work, making business plans, arranging business days, presentations, case studies, debates, discussions, brainstorming, role games, business games, game management, master classes, situational tasks of modeling, problem solving, working in small groups, teaching through electronic platforms, experiments and other interactive methods.

Teachers have the right to choose their own teaching methods, focusing on the achievement of learning outcomes and taking into account the specificities of the subjects taught. The list of teaching methods could be the same for all levels of education, although it could also differ for Master's and Doctoral degree programmes, which use more problem-based, research and practice-oriented teaching methods.

7.2. Considering the competences identified under point 5 as most relevant, how could these be formed? Using which teaching and learning methods?

In order to plan how to form those selected as the most important competences of students, we need to distinguish clearly the processes of teaching and learning.

Teaching activities in Business should include lectures, workshops, practical, laboratory courses and organizing students' independent work. For the formation of selected competences (8 competences) it is necessary to build the learning process as follows:

1. The cycle of disciplines forming generic competences may not exceed 30 percent (72 credits) from 240 credits allocated for training. For the formation of general competences it is advisable to include such compulsory subjects in the curricula in: Philosophy, History, Language and Culture of Speech, Ethics and Aesthetics, Office-work, Information and Communication Technology, Introduction to Entrepreneurship and so on.
2. The cycle of disciplines forming specific (professional) competences may not exceed 70 per cent (168 credits) of the 240 credits allocated for training. For the formation of specific (professional) competences selected in Business, we consider it necessary to include the following compulsory subjects: Macro and Micro Economics, Statistics, Accounting and Audit, Principles of Management, Logistics, Marketing, Business Planning, Strategic Planning, Financial Management, Risk Management, Human Resources Management, Ethics of Business Communication, International Business, Economics, and Law

To develop the necessary competences in Business, the cycle of general subjects may include no more than 30 percent of lectures, 20 percent of seminars (practical sessions) and 50 percent of students' independent work. We must take into account that when we learn we usually follow different stages:

1. Concrete Experience. At this stage a new experience or situation is encountered, or a reinterpretation of existing experiences.
2. Reflective Observation (of that new experience). At this phase any inconsistencies between experience and understanding are of particular importance.
3. Abstract Conceptualization. The previous reflection gives rise to a new idea, or a modification of an existing abstract concept.
4. Active Experimentation. This happens when the learner applies new concepts to the world around him/her to see what happens.

Following this scheme we can design a module or a complete course following the next steps:

1. *Contextualization and reflection:* proposing articles; suggesting to search on internet (articles, videos); suggesting to look for examples in newspapers; visiting a company and asking questions; organizing debates based on all collected information; etc.
2. *Conceptualization:* recommending reading/literature; giving students hand-out materials; dividing concepts among student teams for them to prepare materials and share with each other; inviting guest academic or non-academic lecturers; etc.
3. *Experimentation:* using case studies; making a real plan for a company; internships; group projects; business games, etc.
4. *Evaluation/Self-evaluation/Peer Evaluation: w*ith case studies; making a real plan for a company; internship; group projects; etc.

The members of the Central Asian Business Group suggest the following representations of the learning process:

Figure 1. Different Levels of competences development

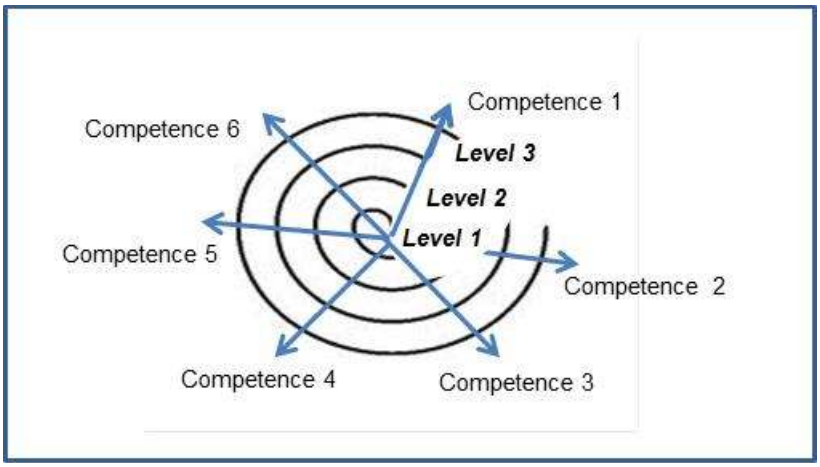

Figure 2. Steps of the learning process

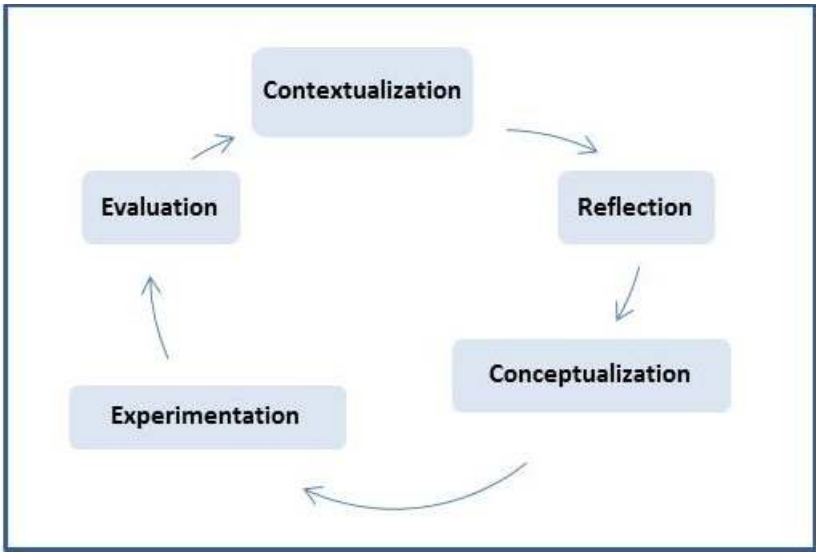

Table 9 - Methods and techniques for the different steps of the learning process

Contextualization and reflection What is this for?	Conceptualization How to do this? How to manage it?	Experimentation How to put into practice? How to implement it?	Evaluation How to evaluate achievement of students?
proposing articles suggesting to search on internet (articles, videos) suggesting to look for examples on newspapers visit a company and ask questions debates based on collected information watching videos …	proposing a reference book; giving hand-out materials to students dividing concepts among student teams for them to prepare materials and share with each other inviting guest academic or non-academic lecturers …	case studies making a real plan for a company internship group projects exercises …	case studies making a real plan for a company internship group projects exercises …

Table 10 - Different learning methods to develop generic competences

Competence	How could this be developed?	Using which learning methods?	Which teaching methods?	How can it be assessed?	What criteria can be used?
1 Ability to use logical and critical thinking	Tasks to identify regularities based on data analysis; Examples of critical assessment of the situation and students' own opinions; Predicting the situation on the basis of analysis and synthesis of the proposed data…	Analytic presentations; Problem-based study; Case studies; Situational tasks of modeling; Independent work …	Lectures Case studies Debates Webinar Workshop Business games Role games Problem solving	Assessment of the level of students' competence in seminars and workshops; Solving case-studies, Written research papers Self/peer ssessment…	Number of reviewed articles/books/literature; Number of times participated in a debate; Percentage of correct answers in an exam

2 Ability to take initiatives and entrepreneur ship	Development of business plans and strategies Search for original and innovative management decisions …	making a business plan; project development experiments; role games; business games; focus groups…	Lectures Workshop Webinar Case studies Business games Debates Role games Problem solving	Assessment of competences developed in the process of solving case-studies and business plans, self/peer assessment	Number of solved case studies; Portfolio of developed activities: Number of business plans successfully developed
3 Ability to learn including autonomous learning	Development of an independent search, processing and analysis of the information from different sources. Making decisions based on analysis of available information Share with the students new technologies and new research methods…	self-study self-study with faculty scientific work using electronic platforms, experiments & other interactive methods debates working in teams focus groups…	Workshop Case studies Business games Problem solving	Questionnaires; interviews, Self/peer assessment…	Number and quality of essays; Number and quality of written papers, oral/written; Quality of presentations, reports; Number of papers presented
4 Ability to communicate in official state, Russian and foreign languages	Public presentation of implemented projects, Essay writing, Argumentation own perspectives and proposed solutions…	debates, field work brainstorming role games business games working in small groups…	Lectures Workshop Webinar Debates Colloquium Role games…	By giving feedback to oral presentations (individually or in teams) By giving feedback to written research papers Self/peer assessment	Quality of essays, written papers, oral/written presentations, reports, written/oral examinations
5 Ability to lead people and work in a	Work in small groups, Basic research, Observing leaders Leading class mates	business games, international competitions	Lectures Workshop Case studies Business games	Evaluation of the competition: Win or lose, the goal is set and reached, the	% achievement of goals

team	Seminars…	and incentives, debates, group projects, business plan development, team sports, role playing…	Role games Problem solving	result is presented in a brilliant and complete way and the contribution of each team member is adequate. Self/peer assessment	
6 Ability to use informational and communicational technologies	Solving case studies, Internships Online business games…	case studies, role playing game educational electronic programmes story telling…	Workshop Webinar Business games Problem solving	Evaluation of laboratory research: checking if the laboratory work has been performed completely or not, using specific methods of processing and data classification, the presence of trends and projections, pattern identification … Self/peer assessment	Observing the amount of work, the amount of time spent, the amount of processed data, the volume of information used, the amount of literature and sources used
7 Ability to apply knowledge in practice	Creating Startup companies, Improving business incubators, Participating in innovative labs, Strengthening links with industry Developing applied research, Participating in scholarship programmes and contests, Improving student	Problem-project approach to learning, Case studies, Role playing games Theory of invention Motivation of students to creativity, Sstorytelling, Educational games, …	Workshop Case studies Business games Role games Problem solving	Evaluating of projects (giving feedback about novelty, relevance, innovation, achievement of goals, having a strategy, the applicability, cost-effectiveness, comparative analysis…) By giving feedback about internships (using cross-evaluation; evaluation from experts from the business	Number of pages, the literature review, the scope and depth of the work, its structure, conclusions and generalizations; the analysis, whether the prediction is valid

	motivation through bonus system...			community, other stakeholders…); Self/peer assessment	
8 Orientation towards the needs of the user	Participating in workshops, Organization of round Tables with the business community, Conducting interviews, Interactive teaching methods, field and desk research, Participating in surveys	RoundTables Conferences Market research Internships …	Lectures Workshop Webinar Case studies Business games Debates Role games Problem solving	Assessment of market research: The study design, hypothesis, sample full or part time, the interpretation of the results, Self/peer assessment	Number of responses in a market research, the clarity of the hypothesis, the number of questions, type of sampling…
9 Ability to adapt to change	Replacing teachers and classrooms sometimes; Setting optional courses (student will have a different group); Field work and practical work at a company …	Working in different groups Internships …	Lectures Workshop Case studies Business games Role games Business incubators Techno-parks	By observing how actively is student participating the students in different environments (for example internships, Techno-park, business incubators…) , and giving students feedback, Self/peer assessment	Number of hours in an internship programme/Techno-park or business incubators Opinion of the tutor in the company and the student of his/her internship
10 Time management	Ask the students to design their own and weekly schedule efficiently When giving a presentation, ask students to adjust to the set time Enforce deadlines …	Teamwork presentations Project work …	Lectures Workshop Business games Debates Role games Problem solving	Checking students' punctuality for lectures and seminars, and for submitting papers; whether they comply with time limits for presentations, if the group uses time effectively. Self/peer assessment.	Number of times the student arrives on time for seminars; number of presentations within time limits, work, tasks, reports, finished successfully on time…

11 Commitment to quality results	Assessment during seminars Giving feedback of presentations Rewarding students with improving results...	project works presentations papers…	Lectures Workshop Case studies Business games Problem solving	By checking student's knowledge during seminars; analyzing submitted paper work and answers on exams Giving feedback of the quality of a report, papers, projects, Self/peer assessment…	Percentage of achieved goals (exams, presentations, projects…)
12 Social responsibility	Feeding through lectures and seminars followed by debates Organizing discussions on topics with social impact Ask students to think about their own proposals…	Lectures Seminars Discussions debates	Lectures Workshop Webinar Case studies Business games Debates Role games Social activities	Observing the behavior of student during social activities, daily classes, Self/peer assessment…	Number of social activities attended; Percentage of times following the rules (no cheating, attending to classes, being honest in a working team…)

Table 11 - Different learning methods to develop subject specific competences

Competence	How could this be developed?	Using which learning methods?	Which teaching methods?	How can it be assessed?	What criteria can be used?
1 Ability to develop and implement strategic, operational and tactical	Strategic, operational and tactical real business plans Business plan developed by teachers	Learning from real business plans; Lectures Practical classes for developing	Lectures Workshop Webinar Case studies Business games Techno-park Problem solving Business incubator	By checking student's knowledge related to business plans through exams, tests, projects… By observing business plans developed by students	Percentage of achieved goals (exams/presentations/project/business plans…) Number of strategic operational and tactical business plans successfully developed

business plan	based on real data Developing business plans by students…	business plans Presentation of business plans…			
2 Process management skills	Learning “the basics” through lectures Developing case studies, practical exercises… …	Lectures Articles case study, practical classes, internships business games	Lectures Workshop Webinar Case studies Business games Role games Techno-park Problem solving Practical exercises	By checking student’s knowledge related to the basics of “process management skills” through exams, tests, projects… By giving feedback to case studies developed by students Assessment of the practical experience during an internship	Quality and quantity of logistical decisions in a business case/techno-park/business game… Opinion of the tutor in the company and the student of his/her internship related to process management Quality of responses in practical exercises
3 Ability to maintain effective relationship with stakeholders (government, institutions, customers, suppliers, etc.)	Developing effective relationships in their own university (with Alumni, staff, students associations, the management board, dean…) During internship developing effective relationships in the company	internships, visiting professor seminars conferences	Workshop Webinar Case studies Business games Debates Role games Social activities Techno-park Business incubator	Report from the tutor in an internship Evaluation list to be filled in by the tutor in the company (internships) Participation in role games, debates…	Opinion of the tutor in the company and the student of his/her internship related to this competence Number of activities in which a student has attended in contact with different stakeholders Quality of participation in role games /debates in which different stakeholders are represented (using a framework or template)

4 Financial management skills	Analysis financial data of a company Preparing financial plans ..	collecting data learning formulas case studies analysis of real financial plans developing financial plans …	Workshop Webinar Case studies Business games Debates Role games Techno-park Problem solving Business incubator	By checking student's knowledge related to financial management through exams, tests… By giving feedback about financial plans developed by students	Percentage of achieved goals (exams/ presentations/ project/business plans…) Percentage of success solving financial problems Level of quality of financial plans developed (using a framework or template)
5 Marketing management and commercial skills	The study of marketing, market research	Planning and conducting market research Business games Conducting manufactur-ing practices	Lectures Workshop Webinar Case studies Business games Role games Techno-park Business incubator Market research Marketing games Problem solving	Drafting and conducting market research Developing marketing and commercial plans Developing communication plans	Quality of marketing research (using a framework or template) Quality of marketing plans developed (using a framework or template) Quality of communication plans developed (using a framework or template) Quality and quantity of marketing and commercial decisions in a business case/techno-park/marketing game…(using a framework or template)
6 Human resources management skills	The study of sociology, psychology, ethics and oratory	Lectures, seminars, business games, debates	Lectures Workshop Webinar Case studies Business games Debates Role games Social activities Techno-park	Through exams, tests, case studies, projects…	Quality of human resources strategy developed (with a template/ framework) Quality and quantity of human resources decisions in a business case/techno-park …(with a template/ framework) Quality of success in role games related to recruiting, selection,

			Problem solving Business incubator		development evaluation (with a template/ framework) Quality of developed activities focused on motivation, career plans… (with a template/ framework)
7 Risk management skills	Analysis of market conditions, the ability to see the strengths and weaknesses of the project, the forecast development of society and economy	Lectures, seminars, conferences, abstracts	Lectures Workshop Webinar Case studies Business games Debates Role games Social activities Techno-park Problem solving Business incubator	Preparation of business plans, taking into account all risks; Risk decisions taken, taking into account all aspects of the environment, and strengths, challenges, weaknesses of the company through business cases, rolegames…	Quality and quantity of risk decisions taken in a business case/techno-park/role game…(with a template/ framework); Level of quality of decisions taken when solving case studies(with a template/ framework).
8 Ability to interact in internal and external environments (taking into account social, political, economic, legal, cultural aspects)	A study of the political, economic, legal, environmental, and cultural situation of the state	Lectures, seminars, conferences, abstracts	Lectures Workshop Webinar Case studies Business games Debates Role games Social activities Techno-park Business incubator	Business games, role playing, market analysis…	Number of successful interactions in a role playing/business games/business incubator; Quality of a market analysis taking into account all stakeholders and environmental situation (with a template/ framework).

7.3. How assessment is carried out today in each context?

For the assessment of the acquired general and specific (professional) competences we can recommend using the following methods:

- Self-evaluation of the level of knowledge of students in the testing center on each subject
- Assessment of the level of students' knowledge in the seminars and workshops
- Assessment of the level of students' knowledge in the intermediate (rating) exams for each section (module) of subjects studied
- Assessment of the level of students' knowledge in the process of final examinations of the subjects
- Assessment of competencies acquired in the process of solving case-studies and business plan development
- Evaluation of independent work performed by students (essays, term papers, final works)
- Evaluation of internships
- Tests
- Questions with answers
- Solving of case-studies
- Business games
- Written research papers
- Oral presentations (individually or in teams)

7.4. How could the competences identified as most relevant under point 5 be assessed? At the first cycle, at the second cycle, at the third cycle?

The development of proper methods to evaluate the level of learners competences is a very important issue. More detailed information can be seen in Tables 10 and 11.

In the first cycle, Bachelor level, general and, to an extent, subject specific competences are formed. They are evaluated during the assessment of independent assignments of students, mid-terms and finals, as well as during the internship process, and on the basis of the graduation thesis.

In the second cycle, Masters level, both general and subject specific competences are formed. These competences are evaluated during the assessment Mid-terms, Research papers in the fields of Business and Management, Internships assessment reports and on the basis of the research thesis.

In the third cycle, PhD level, both general and subject specific competences of higher level are formed and can be evaluated through the assessment of current and final exams, publications, research works and on the basis of the doctoral thesis.

Examples of different methods of assessment for each of the competences in Tables 10 and 11 are the following:

- Written/oral examinations (midterm, final…)
- Reports on research projects
- Oral/written presentations
- Tests
- Portfolio of activities undertaken
- Peer evaluation
- Final projects (business plans, marketing plans…)
- Participation on role games/Business games…
- Public presentation and defense of reports/dissertation/qualification papers…
- Tutor evaluation (in an internship…)
- Self-assessment …

8. Cycle Level Descriptors (with reference to Qualifications Frameworks) in terms of Learning Outcomes

Descriptors at first cycle of the degree include the abilities to:

- demonstrate knowledge and understanding in the field of study, including elements of the most advanced knowledge in this area
- apply this knowledge and understanding at a professional level
- formulate arguments and solve problems in the field of study
- collect and interpret information to make judgments based on social, ethical and scientific considerations
- communicate information, ideas, problems and solutions to both specialists and non-specialists …

Descriptors at second cycle include the abilities to:

- demonstrate knowledge and understanding obtained at the level of higher education, which are the basis for original ideas or the possibility of their development or application, often in the context of scientific research
- apply knowledge, understanding and ability to solve problems in new or unfamiliar situations and contexts within broader (or multidisciplinary) areas related to the field of study
- integrate knowledge, to cope with complexities and make judgments on the basis of incomplete or limited information, based on ethical and social responsibility for the use of these judgments and knowledge
- communicate conclusions clearly to specialists and non-specialists
- form oneself continuously …

Descriptors at PhDs cycle include the abilities to:

- demonstrate systematic understanding of the field of study, mastery of the skills and methods of research used in the field
- plan, develop, implement and adjust complex processes of research
- contribute the own original research in expanding the boundaries of the scientific areas that may merit publication at the national or international level;

- analyze critically, evaluate and synthesize new and complex ideas
- communicate their knowledge and achievements to colleagues, the scientific community and the general public
- promote a society based on knowledge…
-

Table 12- Business and Management -- Learning outcomes

Specific Competences	BACHELOR LEVEL	MASTER LEVEL	PHD LEVEL
Ability to develop and implement a strategic, operational and tactical business plan	Be able to design or take part in developing a strategic business plan	Be able to design and develop a strategic business plan	Be able to design, implement and control a strategic business plan in a complex, intercultural and international environment
Process management skills	Be able to manage processes of simple production using the appropriate IT tools	Be able to manage processes of complex and technological production using innovative IT tools	Be able to manage processes of complex production in multinational and/or multi-sectorial areas in non-ordinary conditions
Ability to maintain an effective relationship with stakeholders (government, institutions, customers, suppliers, etc.)	Be able to set up effective relationships with different customers and suppliers	Be able to set up effective relationships with specific customers and other institutions on a national and international level	Be able to set up effective relationships with all the stakeholders (including research groups) on a national and international level
Financial management skills	Be able to manage simple accounting and finance issues	Be able to manage and audit complex accounting and finance issues on national level	Be able to manage and audit complex accounting and finance issues on national and international level
Marketing management and commercial skills	Be able to design and implement a basic marketing and commercial plan	Be able to develop and implement a marketing and commercial plan in a national and international level using new marketing strategies and IT tools	Be able to develop and implement a marketing plan in a national and international level with a multidisciplinary approach, forecasting and becoming an innovator

Human resources management skills	Be able to use basic theories and models of motivation, leadership and personnel management	Be able to design a plan to select, promote, define, motivate and develop human resources to improve company results and also to organize groups in an effective way	Be able to create and lead a team and also be able to improve your own leadership
Risk management skills	Be able to use qualitative and quantitative basic methods for risk management	Be able to use modern methods of financial management to solve strategic and tactical problems	Be able to use methods of multidisciplinary analysis on different sectors and organizations in a changing market environment and also to be able to create new ones
Ability to interact in internal and external environments (taking into account social, political, economic, legal, cultural aspects)	Be able to interact in internal and external environments (taking into account social, political, economic, legal, cultural aspects) in a simple way	Be able to interact in internal and external environments (taking into account social, political, economic, legal, cultural aspects) in a complex way	Be able to interact in internal and external environments (taking into account social, political, economic, legal, cultural aspects) in an international, complex, global and changing world

9. Conclusions

During the development of the subject area group in Business and Management we studied and identified the features of implementation of the Bologna process principles, in particular the introduction of a credit system, the system of credit recognition in the countries of Central Asia (Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan and Turkmenistan).

In the framework of the project the subject area group developed a list of general and subject specific competencies. As a result of conducted surveys with respondents (graduates, employers, students and teachers), and subsequent discussions within the group, 12 important general competences and 8 subject specific competences were selected as the most necessary for university students in Central Asia majoring in Business and Management.

The most difficult part of work on the document was to define the methods of learning, teaching and assessment of learning outcomes. The aim of the teaching and learning processes is to stimulate the development of students' competences.

It is important to note the contribution of European experts from the University of Deusto, whose advice helped to address the assigned tasks of the subject area group effectively.

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ECONOMICS

1. Introduction

Tuning has become an accepted international methodology for developing guidelines for subject areas based on the analysis of needs in the area, region, country or university where a curriculum is offered. Using it in this way we can implement a systematic analysis of national and international methodology on developing Economics degree programmes, suitable for different education systems and different disciplines, and compatible with European programmes. Analyzing various options in the spectrum of the Economics discipline, one can identify key trends of intersecting disciplines: typical subjects include law, economics, politics and international relations, history, and sociology. There are differences in the composition, context and approaches to the study of Economics, linked to the specificity of national traditions.

Taking into account the rapid development of globalization, information technology, development of various programmes of training, teaching and assessment, and also in view of the growing importance of learning outcomes, it must be noted that there are some differences between the programmes in developing states, on one hand, and European countries, on the other. The requirements of modern educational space necessitate application of modern educational approaches, methodologies and techniques. However, there are some differences between training programmes in the countries (especially, for the developing countries as new members or non-members of the European educational space).

In Central Asian countries, the development of economic sciences is a direct consequence and continuation of the Soviet system of training specialists in economics. Since gaining independence, the countries of Central Asia have started transformation, modernization and reforms that affected the education sector as well. Before, Economics was based on the planned economy. Currently this discipline is based on market mechanisms. Training of economists, competent and qualified to work in the market economy, is the most important guarantee of the stable and sustainable development of the economies of these countries.

In the Central Asian countries there are some specific characteristics in the formation of the required competences for graduates. It is worth noting that in the typical kinds of employment for Economics graduates there are branches associated with the Business and Management field. There is some overlap of spheres and areas of employment between Economics, and Business and Management specialties in the Central Asian countries.

2. Description of the subject area

Economics is a complex of social sciences dealing with production, distribution and consumption of goods and services. Economics research comprises microeconomics (the study of firms, households, selected manufactures and countries) and macroeconomics (the study of the national economy as a whole).

The central theme of Economics is striving to resolve a basic contradiction between infinite human needs and limited resources to meet them. Economic science is multidisciplinary; it also includes social sciences, business studies, banking, and international relations, all of which are used in the practice and understanding of Economics. As a profession, Economics includes research on people's needs, taking into consideration that there are limited resources.

Importance of Economics for Central Asia

In Central Asia the study of Economics helps in developing human capacity to provide sources of sustenance to the people and the economies. A high percentage of the people of Central Asia are unemployed and therefore the improvement of their life depends on developing a successful economy.

The target groups in Economics can be defined as the following

- Academics, for designing new programmes and redesigning existing programmes
- University management and scientific pedagogical staff
- Employers who want the knowledge, skills and abilities of Economics graduates
- Prospective students and students who want to know about Economics studies on all three level (Bachelor, Master, and Doctoral (PhD)
- Associations and organizations of experts and employers in the sphere of education;
- Ministries, organizations and departments of education;
- Accreditation and auditing structures of higher education, quality assurance committees;
- Associations of universities, trade unions.

The goal of the Economics subject area is to train specialists who also have appropriate knowledge of the fields of humanistic, social, economic, mathematical and natural sciences, enabling them to work successfully in their chosen field of activity with universal professional skills contributing to their social relevance and competitiveness in the labor market.

The documents that describe the curricula as to content and form include the following key fields:

- formation of an innovative model of university development tailored to the needs of the labor market;
- development, together with the employers, of educational programmes, standard curricula that ensure competitiveness of the graduates;
- implementation of innovative learning technologies in the educational process and provision of educational services at the level of international standards;
- creation of modern educational, research and laboratory facilities through public and private partnerships;
- arrangement of professional traineeships or practicals at leading enterprises; training highly qualified specialists at the level of modern labour market requirements.

In developing the curricula the employers' opinions and regional economic characteristics must be taken into account.

3. Degrees typically offered at the three cycle levels

In the countries of Central Asia there is a common platform, inherited from the former system of education, but there are some differences as well.

Degree programmes are offered on two or three levels:

First cycle, Bachelor of Economics (all Central Asian countries);
Second cycle, Master of Economics (all Central Asian countries);
Third cycle, PhD/Doctor of Philosophy in Economics (all Central Asian countries except for Turkmenistan).

Duration of studies at the Bachelor and Master programmes in all five Central Asian countries is 4 years + 2 years (Master). PhD training is conducted over a period of three years (in Turkmenistan there is no PhD programme at present).

In general, "Economics" trains specialists for the branches of all regional industries (agriculture, oil and gas industry, construction, transport, etc.).

These guidelines apply to various Economics programmes such as Business Economics, Environmental economics, Global economics, Finance, Banking, etc.

Other degree programmes include a number of units in Economics. This is the case for politics, psychology, sociology, history, law, etc. Economics is also foundational for Business and Commerce programmes.

Possible Specializations in Central Asian Countries

The possible specializations in Central Asian Countries differ a little. These are:

Kazakhstan: enterprise economics, international economics, environmental economics, finance, banking;
Kyrgyzstan: enterprise economics, international economics, environmental economics, finance, banking;
Tajikistan: enterprise economics, international economics, environmental economics, industrial economics, banking;
Turkmenistan: enterprise economics, world economics, state regulation of economy, finance, banking;
Uzbekistan: enterprise economics, economy of the labour, accounting, environmental economics, finance, banking, tax and taxation.

Cooperation of universities and businesses: in developing a new generation of state educational standards the focus is primarily on the integration of science, education and industry. They also take into account the ongoing coordination of educational activities of universities in accordance with the requirements of employers for graduates. In order to strengthen cooperation between universities and enterprises a two-way system of partnerships between universities and businesses in relevant sectors of the CA economy. By strengthening links the

universities receive assistance in upgrading the established curricula and, on this basis, improving educational programmes in accordance with the requirements of employers from the industrial sector and the sphere of the real economy, and they also take into account the latest scientific and technical achievements.

4. Typical employment of graduates at the three cycle levels

Bachelor	Master	PhD
Manager	Researcher	A researcher with the right to conduct independent research and design organizations and research groups
Bankers	Middle and top level managers (taking into account sector specificity)	Teachers, lecturers
Consultants	Consultants in various fields	Consultants and experts
Financiers (general)	Business	Diplomatic and public service
Civil servants	Civil servants	Top management (in all spheres and branches)
Real business sector workers (businessmen)	Marketers	IT managers
Experts	Public (municipal) and international civil servants	Economists at top level
Auditors	Auditors	Engineer economists
Accountants	Accountants	
HR employees	Project Manager, Finance Managers	
Fiscal and tax service	Sport and art managers, Managers in show business and the entertainment industry	
Control and audit sphere	Instructor-researchers	
Marketers	IT Analysts	
Managers, branch managers	Specialists (Uzbekistan, Tajikistan)	

A Bachelor's degree in Economics should prepare for professional careers in economic departments of enterprises and organizations of various industries and under various kinds of ownership, for working in administrative positions and teaching activities in vocational schools, government organizations at national and municipal levels, as well as positions that require basic higher education in Economics.

Economists work in private, mixed and state sectors, in the sphere of education and science, and can also be employed independently (self-employed), i.e., as businessmen, independent consultants and experts, to provide work for themselves and create new jobs.

Higher economics education is required for leadership positions (director, finance and commercial director, chief economist, engineer-economist), in some industrial and financial sectors, such as consortiums, holding companies, financial and industrial groups, banking institutions, insurance companies, investment funds, etc.

Economists with a Bachelor's degree usually need additional professional education at the enterprise or organization, as well as to gain additional knowledge and skills both in the workplace and through self-education. The first years of the Bachelors' practical work needs monitoring. Professional and career growth will accompany the process self-realization, as well as depending on the results and high motivation of the Bachelor.

Economists with a Master's degree can work in leadership positions, including administrative and organizational ones that require skills of strategic vision and organization of a project, the scope of research and analytical work. In addition, they work to develop students' research skills, give consultations, and work as experts on many things. Masters in Economics can continue their training using graduate educational programmes in Economics through PhD courses.

Economists study the economic environment and its impact on the functioning of private companies. They make economic projections, such as micro-, meso-, macro-analysis, mega- and global analysis of the economy, and depending on the strategic priorities they can focus on the analysis of internal, national, regional, sectoral and external economies.

In addition, economists can work for banks, insurance companies, manufacturing companies, consulting firms, logistics and intermediary companies etc. Some economists may find applications for their knowledge and skills in the state, mixed and private consulting companies, working as experts, providing consultations to non-profit associations and so on. Economists may be employed in institutions of higher education and vocational schools. In this case, their activities are confined to teaching, conducting research, publishing articles and books.

Economists are employed in education and consulting, often providing advice to private and public sector organizations, as well as to individuals. To make a career in the field of education in Central Asian countries they need to have a candidate and/or a doctoral degree. The highest teaching and research position in higher education is the professor and in the scientific sphere they may reach the post of Academician in their scientific domain.

Economists who work in state institutions tend to serve as analysts, experts and consultants in politics, development strategy, strategic and indicative plans, as well as business development concepts. Moreover, the graduates perform tasks of different volume and levels. The higher the level of education completed, the

higher will be the level of responsibility which the employee, being engaged in administration or research, can assume.

Efficiency of expenditure of budgetary funds in higher education systems increases with the growth of demand for graduates of the three levels of training in the labor market. Efficiency is defined not only by employment of graduates in general, but by their employment according to their specialty as well.

The relevance of formation of timely and credible indicators of employment of graduates of HEIs using the three-level education system, including their fields of specialization, would allow objective and complex assessments of employment efficiency, as necessary to measure productivity and use of resources. At present there are issues regarding employment of graduates. In this regard, recently, special attention is paid to employment issues at macroeconomic level.

Graduates of the three-level education system after training are distributed in different directions of employment. The main areas of employment of graduates of the three levels should be reviewed through:

- regular monitoring of the distribution of graduates of the three levels of education;
- organization of training at both regional and international levels;
- consecutive analysis of volumes and directions of training at institutions taking into account the results of monitoring;
- promotion of self-employment of graduates of the three levels, including learning the basics of entrepreneurial activity;
- establishment of commissions (services) to promote employment of graduates of educational institutions;
- support for small innovative enterprises established at higher educational institutions.

In addition to the two-cycle programmes based on business content on the first level and continuing to the Master's programme with studies of Economics on the second level, further studies are provided in the following areas:

- organization of practical orientation of bachelors and masters including work placements; students' research practice and internship, aimed at graduates of the first and second cycle majoring in Economics (i.e. Bachelors and Masters);
- preparation for fast track promotion in business careers;
- mastery of a full range of social and human sciences, relevant to the process of training specialists in the field of economics;
- MBA programmes aimed at training Masters of Economics in their professional orientation: application-oriented economics;
- research training programmes aligned with those passed during the second cycle (Master's degree), as well as in accordance with the doctoral research programme;
- short-term and long-term training and re-training courses;
- forming effective curricula for educational programmes at all three levels in the field of Economics.

Central Asian universities pay special attention to the study of Economics not only at Economics departments, but also in other degree programmes, which are not directly linked to the economy. Economics problems can only be solved along with other economic disciplines such as economics of agriculture, transportation and other industries, as well as, for example, the theory of finance, credit, monetary policy, etc. Among all economics disciplines, Economics takes a special place: it has a profound methodological basis. Accordingly, particular attention is being given to obtaining special qualifications at Central Asian universities.

In the first and second cases, studying Economics as a discipline is considered mainstream. Graduates in modern conditions should be able to understand a wide range of economic issues, estimate and evaluate the positive trend of social development to determine independently the changes it undergoes, be prepared to practice and have an accurate world view.

5. The most relevant competences for the Subject Area

Bachelors in Economics possess or are are able to perform the following:
- statistical and economic activities;
- consulting and analytical activites;
- managerial and administrative skills at the micro level;
- as instructors (at the levels of specialized professional and vocational specialties);
- consulting and training services.

Bachelors in Economics study the following disciplines:
Economics, microeconomics, macroeconomics, business economics, statistics, management, marketing, taxation, state and municipal management, economic and mathematical modeling, etc.

Masters in Economics are able to perform the following types of professional activities:
- designing and economic governance;
- research and analytical consulting;
- administrative and organizational activities at micro, meso and macro levels;
- instruction.

A Master in Economics has to study the following subjects:
advanced courses of microeconomics and macroeconomics, regional and sector economics, advanced enterprise economics, project management, etc. Optional courses for the Master's degree are case studies, business situations, research, writing articles, participating in round tables.

PhDs in Economic science are able to perform the following types of professional activities:
- administrative and organizational activities at the micro, meso and macro level, at the level of strategic planning, forecasting, at the mega level;

- project and economic governance;
- management of enterprises, organizations, associations, etc;
- research and development;
- research and analysis activities;
- counseling;
- teaching (at all levels);
- research and management projects;
- making qualified analytical judgments, being expert advisors in the fields of economy and education.

Doctoral studies include specific disciplines, which correspond to the qualification characteristics of the Economics specialty.

Competences involve a dynamic combination of knowledge, understanding, skills, capabilities and ethical skills. General competences can be transferred to a wide range of functions and tasks, that give the students an opportunity to integrate successfully into employment and social contexts. They are not restricted to any particular specialization and can be applied in different situations and areas of expertise. In Tuning, a distinction is made between competences directly connected to the disciplinary or thematic area of study, the Subject Specific Competences (SCs) and those that are important in many or all areas of study. The latter are called General Competences in Tuning (GCs), and are similar to what are often called 'transversal skills', that is abilities that are useful across many or all subject areas.

The first step in Tuning involves developing an awareness of the importance of the general competences in the educational process. Traditionally universities have concentrated on the transfer of knowledge specific to the area of study, and the formation of general competences has been left largely to chance. In order to develop awareness of the importance of the general competences, Tuners from each Central Asian countries developed lists of important General Competences, which were then merged at the first Plenary meeting (Almaty, April 2013).

The following is the complete list of agreed general competences:
1. Ability to analyse and synthesise.
2. Ability to use logic and critical thinking to solving problems.
3. Ability to model, design and forecast.
4. Ability to carry out research using appropriate methods.
5. Ability to take initiatives and entrepreneurship.
6. Ability to innovate.
7. Ability to develop general knowledge.
8. Ability to learn including autonomous learning.
9. Ability to communicate interactively and receive feedback.
10. Knowledge of the professional field.
11. Ability to communicate in a multicultural space.
12. Ability to communicate in the official state, Russian and foreign languages.
13. Ability to lead people and work in a team.
14. Ability to manage information
15. Ability to use information and communication technologies.

16. Social responsibility.
17. Ability to follow a healthy lifestyle.
18. Ecological and environmental responsibility.
19. Knowledge of laws
20. Ability to prevent and resolve conflicts
21. Patriotism and preservation of own cultural values
22. Tolerance and respect for others
23. Commitment to quality results
24. Flexibility
25. Ability to apply knowledge in practice
26. Orientation towards the needs of the user
27. Ability to work autonomously
28. Ability to adapt to change
29. Ability to make decisions
30. Time management

At that meeting the Subject Area Groups also met and developed a list of Subject Specific competences. In order to do this discussions took place with stakeholders and especially with colleagues at the participating universities.

The following is the complete list of agreed specific competences:

1. Ability to analyze and synthesize economic processes
2. Ability to use the bases of the natural and economic sciences to form a working professional knowledge
3. Ability to understand and implement innovational and creative ideas in the economic sphere
4. Leadership skills to govern economic processes
5. Ability scrutinize and analyze problems of ecological economy
6. Ability to understand and encourage the social responsibility of businesses, and public-private partnerships (PPP)
7. Ability to utilize modern information technology in economics
8. Ability to carry out economic calculations as appropriate in different stages of producing goods and services
9. Ability to apply skills and knowledge with respect to state and international taxation systems
10. Ability to analyze and elaborate statistical information
11. Ability to use economic planning and forecasting skills
12. Ability to diagnose the economic condition of the enterprise, to identify problems and to work out solutions
13. Knowledge of and compliance with ethical standards in economics and business
14. Ability to execute economically effective management of human resources: planning, organizing, and regulating the workplace
15. Ability to use the enterprise's economic resources rationally
16. Ability to apply knowledge and skills to identifying connections between micro and macro economies, understand economic cycles, and problem solving
17. Ability to demonstrate cognitive and technical skills that denote broad understanding and knowledge of economics

18. Ability to develop economic models, to produce and apply economic proposals
19. Ability to compare and connect different economic circumstances, to think globally and act locally

Once the competence lists were formed, the TuCAHEA Consortium carried out broad consultations with stakeholders on their relative importance and on their achievement. The very large-scale consultations took place with employers, students, graduates and academics.

In carrying out the consultation, the Economics Subject area Group obtained very broad participation and input. The total number of respondents from the Central Asian countries in Economics is 2683. Questionnaires were returned by the following numbers of respondents: 1275 students, 361 graduates, 250 employers and 797 university faculty.

After the consultation the group selected the most significant general competences for Economics in Central Asian countries.

These are listed in Table 1:

Table 1 - Key General Competences in Economics in Central Asia

10. Knowledge of the professional field
25. Ability to apply knowledge in practice
12. Ability to communicate in the official state, Russian and foreign languages.
23. Commitment to quality results.
6. Ability to innovate.
8. Ability to learn including autonomous learning.
2. Ability to apply logical and critical thinking to solving problems.
29. Ability to make decisions.
19. Knowledge of the law.
7. Ability to develop general knowledge.

The Economics group also selected the most significant subject specific competences, which appear in the Table 2, below:

.***Table 2 - Key Subject Specific Competences in Economics for Central Asia***

1. Ability to analyze and synthesize economic processes.
17. Ability to demonstrate cognitive and technical skills that denote a broad understanding and knowledge of economics
18. Ability to develop economic models, to produce and apply economic proposals
16. Ability to apply knowledge and skills to identifying connections between micro and macro economies, understand economic cycles, and problem solving
14. Ability to execute economically effective management of human resources:

planning, organizing, and regulating the workplace 13. Knowledge of and adherence to ethical standards in the field of Economics and business. 2. Ability to use the basics of natural and economic sciences to form working professional knowledge 5. Ability to scrutinize and analyze issues of ecological economics

The core Economics competences include knowledge acquisition and widening/deepening, development of models to understand economics, the application of core economic concepts and principles, personal skills, organization skills and communication skills, as well as reflection skills.

Putting together Table 1 and Table 2, we can see the Core Economics competences as a whole:

.Table 3 – Core General and Subject Specific Competences for Economics in Central Asia

GC1. Knowledge of the professional field GC2. Ability to apply knowledge in practice GC3. Ability to communicate in the official state, Russian and foreign languages. GC4. Commitment to quality results. GC5. Ability to innovate. GC6. Ability to learn including autonomous learning. GC7. Ability to apply logical and critical thinking to solving problems. GC8. Ability to make decisions. GC9. Knowledge of the law. GC10. Ability to develop general knowledge.	SC1. Ability to analyze and synthesize economic processes. SC2. Ability to demonstrate cognitive and technical skills that denote a broad understanding and knowledge of economics SC3. Ability to develop economic models, to produce and apply economic proposals SC4. Ability to apply knowledge and skills to identifying connections between micro and macro economies, understand economic cycles, and problem solving SC5. Ability to execute economically effective management of human resources: planning, organizing, and regulating the workplace SC6. Knowledge of and adherence to ethical standards in the field of Economics and business. SC7. Ability to use the basics of natural and economic sciences to form working professional knowledge SC8. Ability to scrutinize and analyze ecological economics issues

6. Cycle level descriptors (with reference to Qualifications Frameworks) in terms of competences

In education in Economics, organized on the principle of three cycles (levels) of training, each cycle (level) corresponds to a separate set of learning outcomes (referring to a set of competences and acquisition of necessary qualifications).

According to the “Tuning” project the subject group has made a relevant systemic list of competences for graduates majoring in economics. Organization of the educational process on the basis of cycles (levels) inevitably entails the notion of level of training. For each level certain indexes (descriptors) can be used.

A set of general descriptors have been approved by the Ministers of Education of European countries in the report "Qualifications framework for pan-European higher education space”. Approaches used by the TuCAHEA Tuning project participants are compatible with those.

6.1. First cycle (Bachelor) of Economics – Subject specific competence

A person holding a Bachelor level degree in Economics can outline the main aspects of the organizational, economic and production mission, economic structures, and productive and economic processes. The main spheres of the Bachelor’s knowledge in Economics include organization, planning and coordination of the economic department of an enterprise, performance of economic and analytical work. A person awarded the Bachelor of Economics degree will be able to perform financial and accounting functions, and monitor fiscal and general administration.

Descriptors of the first level, Bachelor of Economics
Graduates of the first (Bachelor) level in Economics, should have certain competences (knowledge, skills and attitudes).

They should be able to:
- effectively use business cases in solving major economic problems;
- apply abstract thinking concerning complex economic systems;
- find necessary information and apply appropriate quantitative analysis methods;
- use the economic rationale for discussions with experts and non experts;
- show economic thinking during formation and evaluation of economic policy;
- teach economic theory in schools and colleges;
- evaluate the results of economic activity of enterprises;
- use appropriate economic indicators in project activities;
- explain the basic concepts of economic systems and methods of making decisions of different kinds: from productive and economic to organizational and administrative ones;
- be an active member of a research team;
- communicate economic arguments effectively with economics and non-economics specialists;
- acquire independent learning skills;
- think strategically and critically

Bachelor graduates will have:
- broad and comprehensive understanding of micro- and macroeconomics principles;

- understanding of contemporary economic issues and engagement in continuous professional development;
- knowledge of the economic language and terms;
- understanding of and ability to address the main shortcomings and limitations of the applied models and methods of analysis.

Bachelor graduates will possess:
- ability to demonstrate knowledge and understanding in a particular area of research, including elements of the most advanced knowledge in the field;
- ability to apply this knowledge and understanding at a professional level
- complex formulation skills in determining arguments to address challenges and situating the chosen point of view, as well as solution skills in a particular area of research;
- ability to collect, process and interpret information correctly, applying various methods of analysis, synthesis and processing information to form an opinion based on adequate, transparent social, ethical and scientific purposes;
- skills for getting information, forming ideas, and outlining problems, considering a range of issues and their solutions, both in terms of economy, and with a number of economic agents;
- communication skills to present clear and independent ideas individually or in teams;
- creative skills, ability to exercise critical thinking.

6.2. Second cycle (Master) of Economics – Subject specific competences

The Master should have developed skills and competences for pedagogical and professional activities, including research and development, design, analytical and expert work. The Master of Economics should be capable of forming a sound scientific view, be aware of scientific and practical problems, and be able to make and implement a plan of research, experimental and pilot studies. The final phase of the training programme for the Master's degree in the Economics specialty creates skills for training and demonstration of scientific and research capacities to integrate theory and practice.

Descriptors of the second cycle, Master of Economics

Graduates of the second level (Master's degree) in economics must have the following knowledge and understanding, qualities, skills and other training results:
- know the language and terminology of the relevant sectors of the economy, including finance, industry and industrial markets: insurance, industrial infrastructure, transport and logical complex, organization and management of business, labor markets, environmental management and environmental economy, domestic and international trade, etc.;
- be acquainted with the results of the latest research and publications in leading professional journals in the chosen field of specialization;
- understand contemporary economic issues and engage in continuous professional development, self-study and self-improvement;
- know modern methods of analysis for some areas of the economy.

Be able to:

- create their own analytical models to use for various economic tasks;
- apply economic thinking and analysis techniques in conducting research in certain areas of the economy;
- propose and promote recommendations in the sphere of economic and social policies;
- collect, select and use data and apply them effectively using quantitative methods of analysis;
- develop their own qualified point of view in professional issues, take part in debates with experts and non experts;
- organize and lead research teams;
- define and apply appropriate indexes on project management;
- teach economic disciplines in specialized secondary and higher educational institutions;
- develop recommendations for organizations for improving economic and policy analysis, as well as project activities.

6.3. Third cycle of education (PhD) – Subject specific competences

Descriptors of the doctoral level (PhD) in Economics
A person holding a third cycle degree in Economics will be able to:
- show systemic understanding of the field of study, skills and research methods used in this field;
- implement own original research to expand scientific and economic boundaries;
- create quality research in areas of science at a level deserving of recognition in high ranking international journals;
- critically analyze, evaluate and synthesize new and complex ideas;
- promote scientific ideas based on fundamental economic knowledge and promote a knowledge-based society;
- develop methodological resources and teaching methods.

Graduates of the third (PhD) level in Economics must have the following knowledge and understanding, qualities, skills and other training results:
- have broad fundamental knowledge, initiative and adaptation to the requirements of the changing economy, the labor market and modern technologies;
- know more about current trends in the development of modern economic science and business, directions of innovative changes and processes of integration, globalization and internationalization taking place in the modern world;
- be aware of scientific schools of national and world economics, their theoretical and practical achievements, and potential areas of application;
- know the methodology, techniques and principles of organizing and carrying out scientific research in the field of economics;
- know and be able to apply pedagogical and research principles, research experience and ethics;

- know methods of motivating and obtaining effective use of competences by research, scientific and pedagogical workers;
- know the latest changes and additions made to the basic provisions and requirements of the laws and regulations of the countries, partner countries and the international community, organizations concerned with management affairs, economic affairs and planning;
- know the latest advances in science, advanced domestic and foreign experience in the field of economics, industrialization and innovation;
- know modern tendencies of world public development;
- know the basics of a systematic and integrated approach to the study of economic processes;
- know a foreign language at a high enough level to implement scientific communication and international cooperation;
- know and be able to interpret correctly and, if necessary, to adapt the results of recent research in the field of economy in the chosen field of specialization effectively and constructively;
- on an ongoing basis improve economic, legal, language and other skills that are necessary for exercising professional-pedagogical activities at a highly qualified level.

To be able to:
- create their own analytical models, project teams, project decisions and apply them in various economic tasks;
- apply specialized theoretical and practical knowledge for the development and introduction of economic ideas;
- set a goal and identify challenges associated with economic, administrative and operational activities of the organization, company, department, ministry, agency;
- analyze, process, synthesize and interpret information;
- plan scientific research in the field of economy and implement the results in practice;
- apply innovative technologies for data collection and the latest scientific advances, to use modern instruments of analysis in conducting basic and applied research, synthesize knowledge from different areas of science;
- perform a full range of operations for research and development and educational activities;
- choose modern research methods taking into account the peculiarities of the object of study, modify existing methods and develop new research methods;
- use resources efficiently: human, financial, and labor related;
- analyze deeply economically and socially important issues and processes, using techniques of social, humanistic, and natural sciences in the field of economics;
- obtain, process and transmit information through the use of modern technical tools;
- effect analytical calculation of administrative, economic, commercial, organizational effectiveness using modern technical means;
- perform, on their own, research and development, scientific and educational activities on issues and disciplines of economics;

- predict the direction of the national economy development;
- assess innovative, investment and economic projects;
- participate in scientific events of international, national and regional level, organizing and conducting round tables, seminars and conferences;
- take initiative and have a responsible attitude towards professional, scientific and scientific-pedagogical activities;
- create leadership skills and ability to work in a team, be a creative personality;
- be competent in the sphere of scientific and managerial economic activity in conditions of continuous updating knowledge of society changes;
- be competent in establishing fundamental and applied tasks, economic research, skilled and creative analysis of modern economies;
- be competent in organizing and holding their own and joint scientific projects, assigning actual problems and expanding the frontiers of research on economics;
- be competent in understanding the principles of the establishing and developing educational programmes in the field of economics;
  be competent in economic, social, legal and communication aspects of economics.

The Table below summarises the levels of competence for each cycle.

.Table 4 – Level descriptors in Economics in Central Asian countries

	Knowledge (To know, understand…)	**Skills (To be able to…)**	**Level of Autonomy and responsibility (To be able to/possess)**
BA	Broad and integrated knowledge of concepts and principles of macroeconomics and microeconomics; Broad knowledge of law; Advanced theoretical knowledge of the changes in society; Communication knowledge in the official state language, in Russian and other foreign languages; Theoretical and practical knowledge in IT and Communication Technology;	Review critically, analyze and synthesize economic problems; Learn and self-learn/Lifelong learning; Communicate in official language, Russian and foreign languages at a basic professional level; Use IT and Communication Technology in a professional area; Apply knowledge and skills in practice and in diverse contexts; Communicate to	Adapt to change; Personal time management; Commitment to quality results at a personal level; Personal social responsibility; Implement appropriate development strategies and creates continuing learning processes autonomously; Take responsibility for managing professional development of individual and groups.

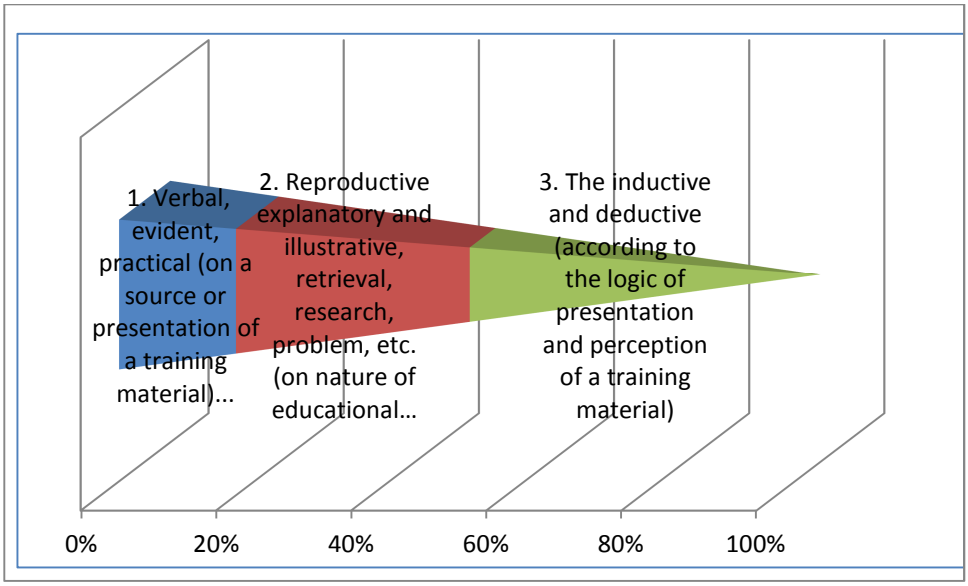
	Advanced knowledge in basic empirical research techniques and knowledge of how to interpret results; Basic theories and models of motivation, leadership and personnel management.	present coherent exposition of knowledge and ideas; Use basic theories and models of motivation, leadership and personnel management; Develop creative solutions to problems; Take into account social, political, economic, legal, cultural and other aspects while analyzing e.g. a company.	
MA	Language and terminology of the respective fields of economy, including finance, different branch and production markets: insurance, industrial, industrial, infrastructure, transport and logical complex, organization and business management, labor markets, environmental management and "green" economy, domestic and international trade, etc.; Results of the latest research and publication in the chosen sphere of specialization; Modern economic problems and involvement in continuous professional development, self-training and self-improvement; Modern methods of analysis in certain areas economy.	Use logic and critical thinking to solve problems; Ability to use innovations; Ability to analyze and synthesize economic processes; Ability to apply knowledge and skills to identify links between the micro and macro economy, economic cycles understand and solve problems.	Organize practical internship and research , and research and development activities as appropriate for first and second cycle students of Economics; Aspire to rapid promotion in a business career; Management, using fully the tools and resources of the social and human sciences of which Economics is one; Participation in training modules as appropriate for the level and specialization of the graduate, and ability to prepare for third cycle studies; Undertake short-term and long-term training and advanced training courses; Create effective curricula of educational programmes of all three levels in the field of Economics.

Ph D	Broad fundamental knowledge, initiative, and adaptation to the changing requirements of the economy, the labor market and modern technologies; Current trends of development of the modern economic science and business, the directions of innovative changes and processes of integration, globalization and the internationalization happening in the modern world; Conception of schools of sciences of domestic and world economic science, their theoretical and practical achievements, potential scopes; Methodology, methods and the principles of the organization and carrying out scientific research in the field of economy; Pedagogical, research and development ethics of the researcher; Methods of motivation and effective use of professional qualities of the researcher, the scientific and pedagogical worker; Recent modifications and the additions to basic provisions and requirements of laws and regulations of the country, the partner countries the world community, and the organizations for control	Use logic and critical thinking to solve problems; Use innovations; Analyze and synthesize economic processes; Apply to apply knowledge and skills to identify links between the micro and macro economy, economic cycles understanding and solving problems; Carry independent research, research and development, scientific and pedagogical activities for addressing economic problems; Predict the directions of economic development of the country; Evaluate innovative, investment and economic projects; Carry out profound analyses of economically and socially significant problems and processes, using methods of social, human and fundamental sciences in the field of economics.	Create own analytical models, project teams, project decisions and to apply them to different economic tasks; Apply specialized theoretical and practical knowledge to development and implementation of economic ideas; Set the goals and define the tasks connected to economic, administrative and practical activities of the organization, the enterprise, department, the ministry, department; Analyze, process, synthesize and interpret information; Plan and carry out scientific research in the field of economics and implement their results in practice; Apply innovative technologies of data collection and the last scientific achievements, to use the modern tools of the analysis when carrying out theoretical and applied research, to synthesize knowledge from different areas of science; Independently to execute a full range of research, development and pedagogical activities; Select modern research methods taking into account features of an object of research, modifying existing methods and developing new techniques; Use resources effectively: human, financial, labor, resource; Receive, process and transfer information with use of the modern technical tools;

	and planning of the economy; Recent achievements of science, a front line domestic and foreign experience in area of economy, industrialization and innovations; Current trends of world social development; Basic systems and integrated approach to the study of economic processes; High level knowledge of foreign language for scientific communication and the international cooperation; Interpret competently, and, in case of need, effectively and structurally to adapt results of the latest research in the field of economy in the selected sphere of specialization; Enhancef the economic, legal, linguistic and other skills which are required for implementation of professional and pedagogical activity at a highly qualified level.		Calc ulate analytically the administrative, economic, commercial effectiveness of organization activity, using modern technical means; Be involved in scientific actions on the international, republican and regional level, as well as organizing round tables, seminars and conferences; Take responsible initiatives in relation to professional, scientific and scientific and pedagogical activity; Develop leadership skills and abilities to work in a team, and a creative personality; Be competent in the area scientific and managerial economic activity in conditions of continuous up-dating of knowledge and society upgrade; Set fundamental and application-oriented tasks, economic research, qualified and creative analysis; Organize and carry out own and joint scientific projects, setting of actual tasks and extending boundaries of scientific research on economic problems; Understand the principles of creation and enhancement of educational programmes in the field of economics; Be competent about the economic, social, legal, and communication aspects of the economy.

7. Approaches to learning, teaching and assessment

In each of the Central Asian countries, traditional approaches to learning, teaching and assessment are used. Study in stages, theoretical, analytical, practical studies and reflection, are provided in a traditional way. At each stage there are objective and criteria for evaluating results. Attention is paid to tasks to promote the development of students' level of thinking from low (knowledge, understanding, application) to high (analysis, synthesis, and assessment). Such a structure will allow changing the attitude of the student from "I will be taught" to one of "I will learn", as the main objective of the modern pedagogical development.



In practice, there are other learning approaches and teaching methods, based on levels of conscious perception of training material: passive, active, interactive, heuristic and others. These definitions and typologies should be explained and clarified with the students, because educational activities and their aims must be understood by students as well as by teachers.

To build an effective educational process various teaching methods have been adopted and are updated every year in accordance with transformational changes in the educational systems of the Central Asian countries. The Central Asian countries have similar approaches to learning, teaching and assessment. Generalized examples of organizing the process of learning, teaching and assessment, applied in all countries of Central Asia, have been selected.

Generally, they can be summarised in the following steps:

- analysis of the academic, organizational and financial, as well as the logical sequence of the educational process:
- identification of needs (employees, mission of the higher educational institution, the level of market development, etc.)

- formation of a training programme
- determination of learning outcomes (general and specific competences)
- development of the educational process (content, structure, credits, level, etc.)
- development of appropriate learning methods
- definition of appropriate methods for assessing the level of knowledge
- examinations and evaluation methods

Bachelor

Competence	Learning	Teaching	Evaluation
Ability to use logical and critical thinking to solve problems	Self-study, business games, technical software, case studies	Lectures, workshops, training for logical and critical thinking	Logical tests, essays
Ability to use innovations	Self-study, the use of technical resources (internet, intranet), role-playing, case studies	Lectures, consultation with an expert (practicals), development of case studies, business games	Using the MAP system (Managing and appraisal of performance)
Ability to analyze and synthesize the economic process	Self-study: the use of basic knowledge for the development of professional skills, the use of Internet resources, intranet, business games, the use of case studies for understanding economic cycles and problem-solving	Lectures, consultations with co-teaching with an expert (practicals), the development of case studies, business games	Using the MAP system (Managing and appraisal of performance)
Ability to apply knowledge and skills to identify links between micro and macro-economics, to understand business cycles and solve problems	Study of multimedia, development of Internet education	Lectures, training in small groups	Testing, problem solving, organization of independent work of students

Master

Competence	Learning	Teaching	Evaluation
Ability to use logic and critical thinking to solve problems	Self-study	Consultation in study topics, lectures, workshops	Using the MAP system (Managing and appraisal of performance), as well as the use of estimates based on the symbiosis of the teacher and a student self-assessment in the form of an integrated assessment, a system of continuous evaluation of knowledge during the whole period of study
Ability to use innovations	Self-study and using technical resources(internet and intranet), role-playing, case studies, independent work in project teams using the principles of scientific research	Lectures, consultation with an expert (practicals), development of case studies, business games, training of innovative methods and technology in the economy	Using the MAP system (Managing and appraisal of performance),as well as the using the estimates based on the symbiosis of the teacher and a student self-assessment in the form of an integrated system of continuous evaluation of knowledge during the whole period of study
Ability to analyze and synthesize the economic process	Self-study: using of Internet resources, individual research, collection and analysis of	Lectures, collection of case studies of various domestic and foreign enterprises, consultation with experts, training of analysis and	Using the MAP system (Managing and appraisal of performance) system, as well as the use of estimates based on

	materials relating to research, conducting experiments to test theoretical hypotheses in practice	synthesis of different situations, investigations of economic problems, training of ability to write scientific articles, and training on the experimental part of the study, data collection and processing of training materials on the research	the symbiosis of the teacher and a student self-assessment in the form of an integrated system of continuous assessment of knowledge during the whole period of study. Publication of scientific articles
Ability to apply knowledge and skills to identify linkages between micro and macroeconomics, to understand business cycles and problem solving	Case studies, modeling of economic processes	Teaching of seminars, lectures, individual work on micro- and macro-economics	Problem solving, testing, essay writing, online testing of knowledge, participation in the webinar

PhD

Competence	Learning	Teaching	Evaluation
Ability to use logic and critical thinking to solve problems	Self-study, hardware	Lectures, consultations with scientific and practical experts, enabling doctoral students to use logic and critical thinking in practice and in research	Using the MAP system (Managing and appraisal performance),as well as the use of on the basis of symbiosis of teacher evaluation and self-evaluation in the form of a doctoral student, a system of continuous evaluation of knowledge during the whole period of study.

Ability to use of innovation	Self-study and using of modern forms of obtaining information, organization of work on innovative projects	Lectures, consultations with scientific and practical experts, "triad" information-innovation-investment (3 I-model), enabling doctoral students to use innovative thinking in practice and in research	Using the MAP system, a system of continuous evaluation of knowledge for the entire period, creativity and innovativeness, synergy
Ability to analyze and synthesize the economic process	Self-study: using of Internet resources, individual research, collection and analysis of materials relating to research, conducting experiments to test theoretical hypotheses in practice	Lectures, collection of case studies of various domestic and foreign enterprises, consultation with experts, training analysis and synthesis of different situations, economic problems, training ability to write articles, and training on the experimental part of the study, data collection and processing training materials on research	The publication of scientific articles written by the presence of research, testing results of the study, the implementation of research results into practical activity of enterprises
Ability to apply knowledge and skills to identify linkages between micro and macroeconomics, understand business cycles and solve problems	Micro- and macro-economic modeling	Development of "magic quadrangle", study of the connection of micro- and macro-economic phenomena and the organization of feedback	Essay, questioning, solving logical economic-mathematical problems, the development of mathematical - economical modeling

8. Cycle Level Descriptors (with reference to Qualifications Frameworks) in terms of Learning Outcomes

The results of educational activities that correspond to the levels of knowledge, as a specific educational path in the field of Economics can be defined by the following descriptors (in accordance with the Economics qualifications framework).

Descriptors of the first level, Bachelor of Economics, include the following knowledge and skills:

- Ability to demonstrate knowledge and understanding in a particular area of research, including elements of the most advanced knowledge in the field;
- Ability to apply this knowledge and understanding in the professional level
- Complex formulation skills in determining arguments to address challenges outlining the chosen point of view, as well as solving problems in a particular research area;
- Ability to collect, process and interpret information correctly, applying various methods of analysis, synthesis and processing information to form an opinion based on adequate transparent, social, ethical, and scientific purposes;
- Possession of skills in getting information, forming ideas, and outlining range of issues relative to a problem and their solutions, both in terms of economics, and with a number of economic agents.

Descriptors of the second level, Master of Economics, include the following knowledge and skills:

- Show knowledge and understanding of education obtained at the level of higher education, which is the basis for the development opportunity or for application of ideas, often in the context of scientific research;
- Apply knowledge, understanding and ability to solve problems in new or unfamiliar situations and contexts within broader (or multidisciplinary) issues related to the research;
- Integrate knowledge to cope with difficulties and create an opinion based on incomplete or limited information based on ethical and social responsibility for use of these opinions and knowledge;
- Clearly report on their inferences and knowledge with specialists and non experts
- Continue to be trained.

Descriptors of the third, doctoral level, include ability to:

- Show systematic understanding of the field of study, skills and research methods used in this field;
- Implement your own original research to expand scientific and economic boundaries;
- Create quality research in areas of science that may deserve recognition in international high ranking journals;
- Critically analyze, evaluate and synthesize new and complex ideas;
- Promote scientific ideas based on fundamental economic knowledge and promotion of a knowledge-based society.

Level Descriptors
Bachelor

Competence	Knowledge	Skills	Autonomy and responsibility
Ability to analyze and synthesize economic processes	Broad and integrated knowledge and understanding of the basics of micro and macro economics	Ability to use logic and critical thinking, develop creative solutions to abstract problems	Incorporate different components into own analysis, taking responsiblity for decision making
Ability to demonstrate cognitive and technical skills	Knowledge of information and communication technology	Use of a wide range of information and communication technologies to support and enhance work at this level and specify new software or refinements / improvements to existing software to increase effectiveness	Manage complex technical activities
Possession of professional knowledge	Advanced knowledge and understanding of the field of specialized subjects	Analyzing of economic models, Use a wide range of routine skills and some advanced and specialised skills in support of established practices in economics	Manage professional activities take resonsibility in a team
Ability to apply knowledge in practice	Broad and integrated knowledge and understanding ofthe field of studies and practice in economy	Ability to calculate and analyze economic and financial documents	Teamwork (participation in the discussion), self-activity
Ability to make decisions	Critical understanding of the principal theories, concepts and principles in economics	Using methods of decision-making	Taking responsiblity for decision-making in unpredictable work or study context

Ability to learn including autonomous learning	Advanced knowledge and understanding of basics of critical and logical thinking and self-analysis	Obtaining information from various sources, recognising achievments and mistakes	Taking responsibilty for managing professional development of themselves, individuals and groups

Master

Competence	Knowledge	Skills	Autonomy and responsibility
Ability to analyze and synthesize economic processes	Specialised knowledge of micro- and macro-economics	Specialised problem-solving skills, integration from knowledge of other fields, using of logic and critical thinking in economics	Teamwork,partly taking responsibilityand self-initiative Demonstrate responsibility for a significant range of resources Demonstrate innovation and advanced problem solving solutions
Ability to demonstrate cognitive and technical skills	Knowledge and understanding the ways of the development of economics, including a range of established techniques of enquiry or research methodologies	Using a range of advanced skills of information and communication technologies in the professional field	Use every opportunity and demonstrate responsibility for decisions
Knowledge of the professional field	Knowledge of all core subjects	Analysis of economic models	Teamwork (ability to organize work in the project team)
Ability to apply knowledge in practice	Knowledge of all core subjects	Ability to calculate, analyze, use economic and financial documents	Teamwork (ability to organize work in the project team), self-work
Ability to make decisions	Knowledge and understanding of the principles	Using of modern methods of management decision-	Organization of individual and teamwork on the

	of managerial decision making	making	basis of brainstorming and collegiality
Ability to learn including autonomous learning	Knowledge of principles of critical and logical thinking in economics	Using of various information sources, including educational – methodical block	Independent work, using of a range of modern educational programmes (online lectures, webinars)

PhD

Competence	Knowledge	Skills	Autonomy and responsibility
Ability to analyze and synthesize economic processes	Innovative, research based advanced knowledge, Know modern trends of development of economics and business	Use of specialized and advanced theoretical and practical knowledge to design and implement economic ideas. Apply a constant and integrated approach to critical analysis, evaluation and synthesis of new and complex ideas	Substantial development of new ideas and concepts in economics including research Demonstrate independence, creativity and ability in advanced analysis and synthesis of complex ideas
Ability to demonstrate cognitive and technical skills	Critical and detailed knowledge and understanding of modern information and communication technologies in the economy	The most advanced and specialised skills and techniques for data collection and the latest scientific research, use of modern tools of analysis	Implement technical and economic models in the direction of research,
Knowledge of professional area	Critical overview of the results of the latest research in the field of Economics and in their chosen field of research	Interpretation and adaptation ofthe results of the latest research in the field of economy and in their chosen field of research	Design and develop own work; deal with complex ethical ideas and professional issues
Ability to apply knowledge in practice	Knowledge and understanding of the methodology,	Comprehensive analysis of the economic and social problems and	Independently perform complete cycle of scientific research and

	methods and principles ofthe organization and conduct of scientific research in the field of Economics	processes	teaching activities. Demonstrate leadership, and selfcritical work, based on research
Ability to make decisions	Knowledge and understanding of the principles of a systematic and comprehensive approach to decision-making	Choose modern methods of decision-making, taking into account the features of the research subject, modify and develop them	Make informed judgments on new and emerging issues and independent decisions
Ability to education and self-education	Economic, legal, linguistic knowledge required to perform professional and pedagogical activity	Create own economic models, the project team, project solutions and apply them to different economic problems	Independently conduct scientific research and scientific - pedagogical activity in the chosen field of investigation and teaching.

9. Conclusions

In order to achieve effective implementation of the Tuning project, the group of experts the Subject Area Group in Economics carried out the following work:

- they carried out extensive consultation with all the target groups of the project (students, alumni, employers and academic staff);
- they carried out the large-scale on-line survey or consultation on the chosen competences;
- they analysed the importance of the general and subject specific competences through the results of the computer online questionnaires
- key competences in "Economics" subject area (general and subject specific) were singled out;
- there was team discussion within working groups of Central Asian countries' representatives (Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan, and Kyrgyzstan), as well as discussions at universities in countries of Central Asia;
- they created preconditions for the establishment of the common learning environment uniform for the Economics learning and teaching in Central Asia and suitable to building a culture of quality education in the countries of Central Asia;
- an investigation of the potential for regional mobility, considering peculiarities, specificity, techniques and technologies was carried out;

- on the basis of this, the pilot student mobility of Central Asian countries was implemented;
- organization of the system of academic mobility of students was adapted to international standards;
- they looked at how to make their systems compatible with ECTS and credit transfer within the academic mobility framework that, according to the Bologna process, allows to enhance and integrate the educational system of the Central Asian countries in the process of Tuning and world system of higher education;
- they grouped the set of recommendations on the use of learning outcomes founded on the competence-based approach;
- they developed a plan in the "Economics" subject area group for further cooperation in the educational space of the Central Asian countries.

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EDUCATION

1. Introduction

Education or Pedagogy is currently one of the most widespread Subject Areas, and that of pedagogue, educator or teacher is one of the best known professions in the world. Pedagogical practice is tightly connected to all other disciplinary fields, and the Education Subject Area may be said to be largely determined by them insofar as the requirements of other professions and kinds of work are mastered in the course of specifically organized object-oriented educational programmes. It follows that Education or Pedagogy is an extremely important and varied Subject Area, and that both the study of teaching and the training of teachers are of key importance for society.

We note that the broad Education subject or thematic area, including “Teacher training”, “Education”, and “Pedagogy”, according to various definitions, has already been elaborated using Tuning methodology in other macro-regions: Europe (subject area “Education”), Africa (subject area “Pedagogical education”), Russia (subject area “Education”), and Latin America (subject area “Education”).

Now the Tuning process for the Subject Area has been joined by Central Asia countries, in this way bringing the Central Asian Higher Education macro-region into the international Tuning context. We hope that these guidelines will be useful for the development of higher education both in this discipline, and in the many other disciplines related to it.

2. Description of the subject area

Pedagogical majors are integrated in the professional group comprised under “Education”. The subject matter and the aims of activities of the graduates of a given group forms the basis for differentiation between the various curricula or tracks offered. The Person and his/her personality is the object of teachers’ professional activity. The relationship between teacher and the object of his/her activity are considered to be ‘subject to subject’ (that is “human being to human being”). Therefore, the basis for the differentiation between the various ‘majors’ in Education is the particular science, cultural sector, or art, addressed, which becomes the means and terrain of interaction (for example, mathematics, chemistry, economy, biology, etc.).

Integrity of the content of subject course “Education” is shown in the unity in purposes and results of professional pedagogical activity of all representatives of this subject area: teachers, lecturers and kindergarten teachers, social teachers, speech pathologists, masters of vocational training.

The subject domain “Education” regards all levels of educational system, including preschool, primary, secondary, higher education, and also training of adults.

The various degree programmes comprised in the "Education" subject area in Central Asian countries are presented here below according to the classifications of higher and postgraduate education.

Kazakhstan

According to the classification of programmes of higher and postgraduate education in the Republic of Kazakhstan, the following curricula are related to this Subject Area:

I. Bachelor degree programmes:

1. Pre-school education
2. Pedagogy and methods of elementary training
3. Pedagogy and psychology
4. Elementary military training
5. Therapeutic pedagogy
6. Music education
7. Fine Art and drafting
8. Physical training and sports
9. Mathematics
10. Physics
11. Informatics
12. Chemistry
13. Biology
14. History
15. Fundamentals of Law and Economics
16. Geography
17. Russian language and literature
18. Kazakh language and literature
19. Foreign language: two foreign languages
20. Technical education
21. Kazakh language and literature in the schools where the language of education is not Kazakh
22. Russian language and literature in the schools where the language of education is not Russian
23. Social pedagogy and self-knowledge

II. Masters degree programmes:

1. Pre-school education
2. Pedagogy and methods of elementary training
3. Pedagogy and psychology
4. Elementary military training
5. Therapeutic pedagogy
6. Music education
7. Fine Arts and drawing
8. Physical training and sports
9. Mathematics
10. Physics
11. Informatics

12. Chemistry
13. Biology
14. History
15. Fundamentals of Law and Economics
16. Geography
17. Kazakh language and literature
18. Russian language and literature
19. Foreign language: two foreign languages
20. Technical education (according to majors)
21. Kazakh language and literature in schools where the language of education is not Kazakh
22. Russian language and literature in schools where the language of education is not Russian
23. Social pedagogy and self-knowledge
24. Pedagogical measurements

III. Doctoral Studies (PhD):

1. Pre-school education
2. Pedagogy and methods of elementary training
3. Pedagogy and psychology
4. Elementary military training
5. Therapeutic pedagogy
6. Music education
7. Fine Art and drawing
8. Physical training and sports
9. Mathematics
10. Physics
11. Informatics
12. Chemistry
13. Biology
14. History
15. Fundamentals of Law and Economics
16. Geography
17. Kazakh language and literature
18. Russian language and literature
19. Foreign language: two foreign languages
20. Technical education (according to majors)
21. Kazakh language and literature in the schools where the language of education is not Kazakh
22. Russian language and literature in the schools where the language of education is not Russian
23. Social pedagogy and self-knowledge
24. Pedagogical measurements

Kyrgyzstan

The following principal educational programmes (PEP) of higher vocational education are implemented in the Kyrgyz Republic in the area or 'direction' 550000, "Pedagogical education":

I. Bachelor degree course:
Scientific education (biology, geography, chemistry)
Physical-mathematical education (physics, mathematics, informatics)
Philological education (native language, foreign language)
Social-economic education (history, fundamentals of law and economics)
Process education (Handicraft, drawing)
Art studies (fine art, music)
Pedagogy (pre-school, elementary, therapeutic pedagogy)
Vocational education (according to major)

II. Masters degree course:
Scientific education (biology, geography, chemistry)
Physic-mathematical education (physics, mathematics, informatics)
Philological education (native language, foreign language)
Social-economic education (history, fundamentals of law and economics)
Process education (Handicraft, drawing)
Art studies (fine art, music)
Pedagogy (pre-school, elementary, therapeutic pedagogy)
Vocational education (according to major)

Tajikistan
According to the State classification of the degree programmes in the Republic of Tajikistan, there are two profiles belonging to this subject area: “Pedagogy” and “Pedagogy - Vocational education” (Bachelor and Master’s degree courses).

I. Pedagogy Profile

1. Educational area: Childhood Pedagogy
   Group of specializations: Pre-school child personality development
   Group of specializations: Personality development of elementary school children
   Group of specializations: Personality development of pre-school and elementary school children

2. Educational area: Adolescent Pedagogy
   Group of specializations: Teaching of the historical-religious and philosophical subjects
   Group of specializations: Teaching of culturological subjects
   Group of specializations: Teaching of philological and linguistic disciplines
   Group of specializations: Teaching of biological, geographical and chemical disciplines
   Group of specializations: Teaching of physic-mathematical disciplines
   Group of specializations: Teaching of technology

3. Educational area: Pedagogy for all ages
   Group of specializations: Aesthetic development
   Group of specializations: Education in the field of physical training
   Group of specializations: Special education

Group of specializations: Social-pedagogical and medical-psychological support

II. Pedagogy. Vocational Education Profile

1. Educational area: Vocational Education
   Group of specialties: Vocational education
2. Educational area: Management in Education
   Group of specializations: Management of educational institutions

Turkmenistan

The following principal educational programmes of higher vocational education (specialist programme) are implemented in Turkmenistan in the area of "Pedagogical education":

Pedagogy and psychology;
Fine art and drawing;
Mathematics;
Physics;
Informatics;
Chemistry;
Biology;
History;
Geography;
Foreign language;
Music education;
Turkmen language;
Cultural studies;
Physical education.

Uzbekistan

According to the State classification of the degree programmes in the Republic of Uzbekistan the following majors are included in the course of "Education - Training of teachers and pedagogical science":

1. Mathematics
2. Informatics
3. Physics
4. Astronomy
5. Chemistry
6. Ecology
7. Biology
8. Bioecology
9. Geography
10. Fundamentals of economic science
11. History
12. Fine art
13. Engineering drawing
14. Pedagogy (according to target area of education)
15. Psychology (according to target area of education)
16. Education system management

17. Technical education (according to Bachelors education courses)
18. Music education
19. Uzbek language
20. Uzbek literature
21. Basic military training
22. Native language (according to the teaching means)
23. Native literature (according to the teaching means)
24. Foreign language (according to the language)
25. Foreign literature (according to the language)
26. Basic concepts of spirituality
27. Philosophical issues and concepts of national independence
28. Basics of Law
29. Educational Methodology
30. Elementary education
31. Pre-school and domestic education
32. Education for the deaf
33. Pedagogy for blind and visually impaired
34. Speech-language pathology
35. Oligophrenopedagogics
36. Physical education and training
37. Manual training methods

Thus, despite some differences in terminology, in Central Asian countries, **four general types of degree programmes** are comprised in this subject area: Pedagogical education, Psychological-pedagogical education, Special (defectologic) education and Vocational education (according to major).

Nowadays, psychology and pedagogical knowledge is necessary for experts in practically all spheres of human activity. Therefore such disciplines as “Pedagogy” and “Psychology” are presented in the block of general education disciplines in many areas of training not obviously related to Education/Pedagogy.

In fact, the “Pedagogy” domain may be linked with programmes of any disciplinary area and regards teaching of pupils and students, and also personnel development in organizations.

3. Degrees typically offered at the three cycle levels

Pedagogical training is understood as a component of the educational process during which psychological-pedagogical and special competences are formed in accordance with levels of higher education and the qualification to be awarded.

In the educational policy of the countries of Central Asia pedagogical education is considered to be one of the priority directions of education, as it promotes social stability and society development, and provides staff training for all fields of the economy.

Kazakhstan
3 level educational model:
- First level (Bachelor level) – Bachelor degree course – 4 years;
- Second level (Master level) – Masters course:
  - Subject-oriented training – 1 year;
  - Training and professional development – 2 years
- Third level (PhD doctors' level) – Doctoral studies PhD – 3 years.

Kyrgyzstan
3 level educational model:
- First level (Bachelor level) – Bachelor degree course – 4 years;
- Second level (Master level) – Masters course:
  - Training and professional development – 2 years.
  - Postgraduate education – Postgraduate study – 3 years
- Doctoral studies – 3 years

Tajikistan
3 level educational model:
- First level (Bachelor level) – Bachelor degree course – 4 years;
- Second level (Master level) – Masters course:
  - Subject-oriented training – 1 year;
  - Training and professional development – 2 years
- Third level (PhD doctors' level) – Doctoral studies PhD – 3 years.

Turkmenistan
- Specialist programme – 5 years
- Postgraduate study – 3 years
- Doctoral studies – 3 years

A 2-level system introduced in three higher education institutions of the republic on a trial basis.

Uzbekistan
3 level educational model:
- First level (Bachelor level) – Bachelor degree course – 4 years;
- Second level (Master level) – Masters course:
  - Training and professional development – 2 years
- Third level – Doctoral studies – 3 years.

The key constituent element of the Education/Pedagogy subject area is knowledge of such sciences as: pedagogy, psychology, developmental physiology and school hygiene, sociology, self-knowledge, theory and educational methodology, general and private teaching methods.

This subject area is implemented at all three levels of education. In the curriculum of higher educational institutions this area is present as specific subject matter (Pedagogy, Theory and practice of general pedagogy, Social pedagogy, etc.), and also as a curriculum in "Pedagogy".

4. Typical occupations of graduates at the three cycle levels

Bachelor degree programmes:
Graduates are typically employed in state or private organizations for education (preschool, general education, specialized, technical and professional), administrative educational bodies (teacher, educational psychologist, teacher-speech pathologist, master of vocational training, tutor, social teacher)

Masters degree programmes:
Graduates are typically employed in general educational institutions, various specialist training facilities, educational institutions of initial vocational education, secondary vocational education and higher vocational education (master of vocational training, tutor, social teacher, college teacher, lecturer, researcher, teaching methodology expert)

Doctoral studies:
Individuals holding a PhD in Education are typically employed in research institutes, higher educational institutions (teacher, researcher, head of education authority divisions).

5. The most relevant competences for the Subject Area

A large-scale consultation was held by the countries of Central Asia from 15 May to 30 July 2013 among graduates, employers, academic community and students. Questionnaires were designed to enquire about respondents' views of the importance and the level of achievement of 30 "general competences" and 22 subject specific competences. The 30 general competences were those chosen by all five countries as particularly significant for Central Asia; the 22 subject specific competences were chosen by the Subject Area Group. The number of respondents from the Education Subject Area was, for the general competences, 459 academics, 226 employers, 581 students and 248 graduates, for a total of 1514 respondents. For the subject specific competences, 403 academics, 293 employers, 524 students and 238 graduates, for a total of 1458 persons, responded to the questionnaires.

On the basis of the responses, and the reflections of the Group, 11 General Competences and 11 Subject Specific competences were chosen as particularly relevant.

5.A. General competences

The complete list of 30 agreed by the TuCAHEA Consortium as a basis for the consultation were:

Code	Competence
GC1	Ability to analyze and synthesize
GC2	Ability to use logical and critical thinking for solving problems
GC3	Ability to model, design and forecast

GC4 Ability to carry out research applying appropriate methods
GC5 Ability to take initiatives and entrepreneurship
GC6 Ability to innovate
GC7 Ability to develop general knowledge
GC8 Ability to learn including autonomous learning
GC9 Ability to communicate interactively and receive feedback
GC10 Knowledge of the professional field
GC11 Ability to communicate in multicultural context
GC12 Ability to communicate in official state, Russian and foreign languages
GC13 Ability to lead people and work in a team
GC14 Ability to manage information
GC15 Ability to use information and communication technologies
GC16 Social responsibility
GC17 Ability to follow a healthy lifestyle
GC18 Ecological and environmental responsibility
GC19 Knowledge of the laws
GC20 Ability to prevent and resolve conflicts
GC21 Patriotism and preservation of own cultural values
GC22 Tolerance and respect for others
GC23 Commitment to quality results
GC24 Flexibility
GC25 Ability to apply knowledge in practice
GC26 Orientation toward the needs of the user
GC27 Ability to work autonomously
GC28 Ability to adapt to change
GC29 Ability to make decisions
GC30 Time-management

Table 1- General Competences which are most important for Education in Central Asia

GC27 Ability to work autonomously
GC29 Ability to make decisions
GC08 Ability to learn including autonomous learning
GC10 Knowledge of the professional field
GC13 Ability to lead people and work in a team
GC25 Ability to apply knowledge in practice
GC22 Tolerance and respect for others
GC01 Ability to analyse and synthesize
GC12 Ability to communicate in the official state, Russian and foreign languages
GC06 Ability to innovate
GC20 Ability to prevent and resolve conflicts

5.B. Subject specific competences

The following 22 Subject Specific competences were chosen by the Group and offered in the consultation:

- SC1 Ability to plan and organize an educational process (development, realization and evaluation)
- SC2 General theoretical and professional knowledge and ability to use it critically in organizing educational processes
- SC3 Ability to elaborate and carry out a teaching and learning strategy appropriate to the educational content
- SC4 Ability to project and carry out an educational process based on interdisciplinary links
- SC5 Knowledge of and ability to implement differentiated approaches on the basis of physical, psychological and social specificities of learners
- SC6 Ability to develop and implement educational strategies and evaluate them on the basis of concrete criteria
- SC7 Ability to plan, manage, implement and evaluate educational programmes and projects
- SC8 Ability to select, develop and utilise didactic materials as appropriate to the contents and the discipline
- SC9 Ability to identify and assess learning difficulties and to create a supportive learning environment
- SC10 Ability to develop learners' logical, critical and creative thinking
- SC11 Ability to create and implement educational processes as appropriate to different levels of learners
- SC12 Ability to develop and implement integrated educational strategies for people with special needs
- SC13 Ability to select, use and assess information and communication technologies for teaching and learning
- SC14 Ability to educate learners on the basis of universal principles (common to all mankind) and national values, citizenship and democracy
- SC15 Ability to conduct research in the field of education and apply the results in educational practice
- SC16 Ability to elaborate and apply innovations in organizing the learning experience
- SC17 Ability to conduct self-analysis and reflection as a means of improving the quality of education
- SC18 The ability to analyze critically, focus and facilitate processes of change in society through education
- SC19 Ability to formulate and implement educational strategies that take socio-cultural diversity into account
- SC20 Ability to foresee and encourage the personal and professional development of learners
- SC21 Knowledge of the historical development of education in one's own country and in Central Asia
- SC22 Ability to foster social cooperation with various agencies and community members in order to promote the development of educational processes

Table 2 Subject Specific Competences which are most important for Education in Central Asia

SC2	**General theoretical and professional knowledge and ability to use it critically in organizing educational processes**
SC5	**Knowledge of and ability to implement differentiated approaches on the basis of physical, psychological and social specificities of learners**
SC8	**Ability to select, develop and utilise didactic materials as appropriate to the contents and the discipline**
SC17	**Ability to conduct self-analysis and reflection as a means of improving the quality of education**
SC1	**Ability to plan and organize an educational rocess (development, realization and evaluation)**
SC13	**Ability to select, use and assess information and communication technologies for teaching and learning.**
SC14	**Ability to educate learners on the basis of universal principles (common to all mankind) and national values, citizenship and democracy**
SC16	**Ability to elaborate and apply innovations in organizing the learning experience**
SC10	**Ability to develop learners' logical, critical and creative thinking**
SC9	**Ability to identify and assess learning difficulties and to create a supportive learning environment**
SC12	**Ability to develop and implement integrated educational strategies for people with special needs**

6. Cycle level descriptors (with reference to Qualifications Frameworks) in terms of competences

Here we present a general indication of the competences to be developed in Education programmes at the three levels.

6.1. First Cycle (Bachelor's) degree

First cycle graduates:
Graduates of First cycle Education programmes should be able to demonstrate:

Knowledge of:
- fundamentals of pedagogy, psychology and teaching methods of the corresponding discipline;
- the fundamental (advanced) theoretical bases of the taught discipline;

- natural science (social, humanitarian, economic) disciplines, facilitating formation of the highly educated personality with broad-based knowledge and level/principles of thinking;
- state-of-the-art technology, for use of information technologies in the sphere of professional activity;
- social and ethical values based on public opinion, traditions, customs, public norms and to be guided by them in the professional activity;
- standards of business ethics;
- tradition and culture of world nations;
- bases of legal system and legislation of the Government;
- tendencies of society social development.

Skills necessary to:
- use the theoretical knowledge gained in practice in teaching;
- use interactive methods of teaching;
- attract the attention of an audience;
- consider the specifics of an audience;
- use innovative technologies in the educational process;
- organize the educational process.
- be able to be guided adequately in various social situations;
- be capable to work in team, argue one's point of view reasonably, proposing new solutions;
- be able to find compromises, to correlate the opinions of a group;
- seek professional and personal growth.

Level of autonomy and responsibility sufficient to:
- independently manage the educational process and teaching-educational activity;
- take responsibility for achievements of knowledge and abilities of trainees;
- take responsibility for decision-making in unpredictable situations;
- demonstrate self-sufficiency and responsibility for the transfer of basic and special knowledge.

6.2. Second cycle (Master's) degree

Graduates of Second cycle Education programmes should be able to demonstrate:

Knowledge of:
- profound knowledge of the methodologies of pedagogy and psychology;
- expanded special knowledge according to the specific field;
- awareness of unresolved scientific problems and critical analysis;
- profound knowledge of bases of scientific research;
- methodology of scientific knowledge;
- main driving forces of change of economic structures;
- features and rules of investment cooperation;
- a minimum of one foreign language at the professional level, allowing to conduct scientific research and practical activities.

Skills necessary to:

- integrate the knowledge gained into the educational process and research activity;
- develop interactive methods of teaching;
- develop and introduce innovative technologies of training;
- apply scientific methods of knowledge in professional activity;
- analyze critically existing concepts, theories and approaches to the study of processes and the phenomena;
- carry out microeconomic analysis of economic activity of education institution and use its results in management;
- put into practice new approaches in the organization of marketing and management in educational institutions;
- make decisions in difficult and non-standard situations in the field of the organization and management of economic activity of educational institution;
- integrate the knowledge gained within different disciplines, to use them for the solution of analytical and administrative tasks in new or unfamiliar conditions;
- think creatively and use a creative approach to the solution of new problems and situations;
- carry out information analysis and information and bibliographic work with the application of modern information technologies;
- generalize the results of experimental, research and analytical work in the form of the thesis, articles, reports, analytical note and etc.

Level of autonomy and responsibility sufficient to:

- independently develop and introduce new methods of management of the teaching and educational process;
- take responsibility for formation of special competences in trainees;
- analyze scientific information and draw conclusions;
- formulate a strategic development plan for an educational institution.

6.3. Third cycle (Doctoral) degree

Those awarded a PhD in Education should be able to demonstrate:

Expert knowledge of:

- the theory and methodology of scientific research;
- modern trends, directions and regularities of development of domestic and foreign science in the conditions of globalization and internationalization;
- methodologies of scientific knowledge;
- achievements of world and domestic science in the field of education;
- foreign languages for scientific communication and international cooperation.

Skills necessary to:

- plan critically and design educational programmes;
- solve actual (critical) scientific problems;
- develop and introduce innovative technologies in the course of scientific research;

- introduce results of scientific research into the educational process;
- plan, develop, realize and update complex processes of scientific research;
- make a contribution with own original research to expand the limits of the scientific area deserving publication at national or international level;
- analyze and synthesize new and difficult ideas;
- share the knowledge and achievements with colleagues, the scientific community and the general public;
- assist in the development of the knowledge based society;
- organize, plan and realize process of scientific research;
- analyze and compare various theoretical concepts in the field of research and draw conclusions;
- analyze and process information from various sources;
- conduct independent scientific research characterized by academic integrity, on the basis of modern theories and methods of analysis;
- generate own new scientific ideas, report the knowledge and ideas to scientific community, expanding borders of scientific knowledge;
- choose and use effectively modern research methodology;
- plan and forecast further professional development.

Level of autonomy and responsibility sufficient to:
- take responsibility for the organization of scientific research for priority trends in science;
- analyze and organize existing scientific approaches and judge them with a critical mind.

7. Approaches to learning, teaching and assessment

The main *objective* of pedagogical education is to train qualified specialists of appropriate level and field, competitive in the labour market and in the educational sphere, as well as masters in their own profession and competent in related fields of activity, able to work effectively within their specific area at the international standards level, ready for continuous professional growth, social and professional mobility.

7.1. Approaches to learning

The general approach is a competence- and activity-based modular approach to learning.

The competence-based approach consists of defining the required competences which learner should master, i.e. common cultural and professional competences. This approach draws attention to the result of education, when its result is person's ability to act in various problematic situations rather than volume of information learned. Activity content and methods of education are emphasized.

Such education allows adapting in an optimal manner to a varied and comprehensive reality and to practice key competences in variety of social situations.

Modularisation allows individualization of learning: for learning content, for rate of learning, for various levels of self-sufficiency, learning methods and approaches and methods of assessment and self-assessment.

The basis of modular learning is the educational module including: a completed information block, a learner targeted action programme; recommendations (advice) of the teacher for its successful implementation. The educational process based on modular technology promotes development of learners' self-sufficiency, their ability to work considering individual methods of study of educational material and using a map of learning routes.

7.2. Approaches to teaching

The implementation of modular, competence-based approaches makes serious demands for change of teaching methods which should be transformed from "knowledge transfer" to "teaching how to learn". Teaching is based on combination of classical academic education with simultaneous active introduction of innovative educational technologies, first of all interactive technologies.

Hence, we may say that teaching methods at present can consist of:
1. Traditional methods of teaching;
2. Innovative methods of teaching including: training by problems or problem-based learning, technology of stage-by-stage formation of intellectual abilities, technology of critical thinking development, creative workshop, master class, information labyrinth, mind maps, portfolio, TIPS, collective interaction, adaptive training developing cooperation, design technology, group discussion, training, business games, role games, press conference, "buzz" groups, etc.;
3. E-learning.

Using effective educational technologies allows learners to master key units of professional educational content, i.e. competences. In addition, the learner learns not only the bases of his/her profession, but also cooperation, partner interaction, interpersonal skills, continuous/lifelong learning, work in a team, collective decision-making, how quickly to establish contacts and conduct negotiations, implement presentations and self-presentation, form images, quickly redeveloping competences due to changing requirements.

A competence-based approach assumes the readiness of learners to integrative practice (binary method). This method promotes the development of logical thinking; it mainly strengthens a worldview approach, impacting on mindset. Therefore, for example, successful learning in such a course as "Fundamentals of Law" for "Education" programmes is based on a synthesis of knowledge (specific content) with philosophy, psychology, pedagogy, cultural science, foreign languages, etc.

Using the elements of game technologies, intended for re-creation and learning of social experience, which forms and develops self-control of behavior, students

conclude that only by means of interdisciplinary links is it possible to explain reality objectively.

The following methods are used in course units on “Teaching methods”: “work in groups”, “role games”, “simulation games” where students, acting as educators and learners, gain skills of simulation and management of the learning process.

The implementation of the competence-based approach focused on the student, assumes a shift from ‘training’ to ‘education’ that requires the enhancement of the role of **independent work**. Students’ independent work is realized as preparation for classroom lessons and participation in them, execution of tasks during practical exercise lessons (discussion of study questions, reports, reviews and their discussion, participation in business games and discussions).

The following may be suggested as tasks for students’ independent work:

- work with educational texts (note taking, mapping, tabulating);
- summarizing literature;
- annotation of books, articles;
- work with Internet sources (selection of Internet resources, development of web-pages, search of illustrations, participation in group work on social media);
- preparation of creative tasks (role game project, lesson plan, plan of pedagogic event);
- glossography for discipline;
- Preparation of essays, articles, messages and research papers for specified psychological and pedagogical tasks etc.

7.3. Approaches to assessment

The assessment of the quality of learningachieved by the educational programme includes periodic assessment of progress (assessment of student’s independent work), intermediate (test, colloquium, pass, examination) and final assessment (final state examination, thesis defense).

Assessment methods: written and oral examinations, reports on scientific-research work, expert assessments, tests, portfolio, business games, final general exam, thesis defense.

Periodic progress assessment and midterm assessment of learners is performed considering a grade or rating assessment system of measuring achievement.

The means of assessment include periodic or continuous progress assessment and midterm assessment in each University in an educational programme; they includes questions and tasks for practicals, laboratory classes and tests, colloquia, pass/fail tests, tests and examinations, computer testing programmes, course papers, and reports.

Assessment of the quality of learners’ training is also performed within external assessment of educational achievements (EAEA), which is carried out by an independent organization for monitoring the education in a country.

Final State Certification is obligatory for each university graduate and includes an overall interdisciplinary examination and thesis defense. Final State Certification is a procedure for certification of general, subject and special competences mastered by graduate. The qualification (academic degree) is conferred according to its results.

7.4. How can the most relevant competences be learned, taught and assessed?

Bachelor's programme

Competence	Learning	Teaching	Assessment	Assessment criteria
Ability to apply analysis and synthesis	Independent work, applying of fundamental knowledge for professional skills development, Internet resources using intranet, role games, using of case study for applying in professional activity	Lectures, teachers and experts tutorial (practice, development of case study and business games)	Essay, debates and presentations, scripts	Use of the literature and data, problem definition, coverage of the issue, quality of arguments formed, logic of the presentation
Ability to plan and arrange an educational process	Know and apply knowledge of regulatory documents, applying of fundamental knowledge, didactics fundamentals and ICT using	Lectures, experts' tutorial (practice), development of master classes, creative workshop, e-learning, and business games	Preparation of plan, case study, profile and summary	Selection and use of literature and data; selection and application of corresponding educational methods and technologies, and assessment methods
Ability to select, improve and apply didactic materials in	Independent work, knowledge of pedagogy and psychology	Lectures, experts' tutorial (practice), development,	Presentations, portfolio, case study, preparation of lesson plan,	Selection and application of literature, and data; selection and

compliance with discipline content	fundamentals, discipline material, innovative and traditional methods of training methods	business games	plan of pedagogic events	application of corresponding educational methods and technologies

Master's programme

Competence	**Education**	**Teaching**	**Assessment**	**Assessment criteria**
Ability to apply analysis and synthesis	Independent work, applying of special knowledge for professional skills development, using of special Internet resources, intranet, using of case study for applying in scientific researches	Lectures, thesis advisers and experts' tutorial, using of method for critical thinking development (practice, development of case study and role games)	Essay, debates and presentations, scientific and research work	Application of corresponding scientific literature and data; research formulation, presence innovation in research, theoretical and practical relevance of the research
Ability to plan and arrange an educational process	Applying of strategic and approach papers, applying of special knowledge, scientific fundamentals of didactics, skill to develop projects and propose approached to raised problems	Lectures, thesis adviser and experts' tutorial (practice), creative workshop, e-learning	Preparation of plan for studies and pedagogical work, scientific evidence, methodologies of scientific researches, profile and summary	Selection and application of corresponding special scientific literature and data; selection and application of corresponding scientific methods, educational technologies and assessment methods

Ability to select, improve and apply didactic materials in compliance with discipline content	Research work, thorough knowledge pedagogy and psychology, discipline specifics, skills in integration of different education methods	Lectures, thesis adviser and experts' tutorial (scientific researches)	Presentations, development of creative tasks, essay, articles, scientific works for specified issue	Selection and application of special scientific literature and data; selection and application of corresponding scientific methods and educational technologies

PhD programme

Competence	**Education**	**Teaching**	**Assessment**	**Assessment criteria**
Ability to apply analysis and synthesis	Annotation of books, scientific articles, statements and scientific works, grasp of scientific terminology, methodology of scientific research	Lectures, scientific workshops, thesis advisers and experts' tutorial, applying of scientific analysis methods (practicum)	Scientific reports, papers, debates and presentations, results of research work, introduction certificates, dissertation chapters	Corresponding applying of scientific literature and data; thematic justification, presence of research scientific novelty, theoretical and practical relevance of the research
Ability to plan and arrange an educational process	Applying of strategic and approach papers, management of processes and solution of technological and methodological problems, skills in development of scientific projects and proposal of	Lectures, thesis adviser and experts' tutorial (practicum), scientific experiments, research centers	Scientific reports, papers, debates and presentations, results of research work, introduction certificates, dissertation chapters, justification, methodologies of scientific researches	Applying and selection of corresponding special scientific literature and data; selection and applying of corresponding scientific and research methods and technologies of education,

	approaches to solve specified issues			and assessment methods
Ability to select, improve and apply didactic materials in compliance with discipline content	Scientific and research work, skills in innovative research technologies in pedagogy and psychology, performance of comparative analysis in this subject area, skills in integration of different education methods	Lectures, thesis adviser and experts' tutorial (scientific researches)	Presentations, results of research work, introduction certificates, dissertation chapters, articles, scientific work for specified theme, comparative analysis report	Applying and selection of special scientific literature and data; selection and applying of corresponding scientific methods and technologies of education

8. Cycle Level Descriptors (with reference to Qualifications Frameworks) in terms of Learning Outcomes

Graduates of the first degree (Bachelors) in the "Education/Pedagogy" subject area should:

- show knowledge of the basic concepts and categories of pedagogy and psychology;
- show knowledge of personality and attractive qualities and personality characteristics, motivation methods, as well as control of behavior and activity;
- apply psychological and pedagogical knowledge to solve personal, social, and professional tasks;
- consider social and cultural trends, patterns and principles of training and education during analysis of public and educational practice;
- organize efficient interpersonal and professional interaction and communication, including in conditions of multicultural and international community;
- define and consider people's personality and attractive characteristics taking into account age and gender differences during interaction and communication in social and professional spheres;
- use psychological and pedagogical knowledge, methods and technologies of training and education to solve social and educational, professional, management tasks, and to carry out training events with personnel;
- achieve self-acceptance, develop and implement projects of self study, self-education and professional self-improvement.

Graduates of the second degree (Masters) in the “Education/Pedagogy” subject area should:

- show special knowledge of subject area, principles and structure of scientific activity arrangement, methodology of scientific cognition;
- use learned knowledge for ingenious development and applying of ideas within the framework of scientific research;
- define and solve modern scientific and practical problems;
- master modern methods and technologies of research;
- dissect existing concepts, theories and approaches to processes and phenomena analysis;
- integrate knowledge gained within different disciplines to solve research tasks in new strange conditions;
- perform information and research, and information and bibliographical work with involvement of modern information technologies, including methods of information acquisition, processing and storage;
- think outside the box and creatively solve new problems and situations;
- teach in college;
- implement management activity.

Graduates of the third degree (Doctors) in the “Education/Pedagogy” subject area should:

- show thorough knowledge of current trends, directions and patterns of science development under globalization and internationalization conditions;
- have a complete command of foreign languages for scientific communication and international cooperation;
- judge with a critical mind and develop educational programmes;
- develop and introduce innovative technologies during scientific researches;
- introduce results of performed scientific researches to educational process;
- plan, organize, implement and correct scientific research, and experimental research activity according to the chosen approach;
- generate own new scientific ideas, provide own knowledge and ideas to scientific community extending the frontiers of scientific cognition;
- choose and effectively use modern methodology of research;
- implement management activity;
- plan and organise further professional self-development;
- show self-sufficiency and responsibility as a scientific researcher.

Table 3- Education -- Learning outcomes
Bachelor Level

Competence	Knowledge	Skills	Autonomy and responsibility
Ability to apply analysis and synthesis	Knowledge of research methods for the object of study; basic terms and categories of analysis and synthesis, best scientific practice	Ability to apply methods of analysis and synthesis	Compare, classify and systemize terms and facts; find cause-and-effect relationships; define objects of study as common, particular, ordinary; to divide into composite elements
Ability to plan and arrange educational process	Knowledge of regulatory documents and basic terms and categories of pedagogy and psychology; personality, attractive qualities and characteristics of personality, methods of motivation, as well as for checking on behavior and activity	Ability to plan and arrange plans materials and organize strategies for an educational process	Critically rethink background, change the profile of professional activity, if required; realize the social significance of the future profession; define and consider people's personality and attractive characteristics taking into account age and gender differences
Ability to select, improve and apply didactic materials in compliance with discipline content.	Fundamental theoretical skills in general pedagogy and professional activity; psychological and pedagogical methods and technologies of training and education to solve educational, pedagogic and management tasks, as well as teaching classes	Ability to select, improve and apply didactic materials in compliance with disciplinary content and pedogic strategy	Perform logical and critical thinking; integrate and analyze information for goal setting and selection of achievement paths; perform research and information work involving modern information technologies, including methods of scientific information acquisition, processing and storage

Table 4 - Education -- Learning outcomes
Master Level

Competence	Knowledge	Skills	Autonomy and responsibility
Ability to apply analysis and synthesis	Knowledge of innovative methods for investigating the object of study; notions and categories of analysis and synthesis in an advanced scientific context.	Present own conclusions and opinions for proposed research; apply progressive approaches of logical and critical thinking for analysis and synthesis; use Information and Communication Technologies (ICT) in research	Carry out analysis and synthesis of the object of study; lead a team; take responsibility for making a contribution to the professional growth of a team
Ability to plan and arrange educational process	Knowledge of new scientific approaches in pedagogy and psychology; scientific concepts for improvement of planning and organization of educational process; state-of-the-art technologies and software applied in pedagogy; scientific theories of human resources management	Plan and carry out creative tasks and projects; put knowledge to use; execute a plan for human resources development and improvement of results of the educational process.	Analyze and update the educational process; team management; take responsibility for making a contribution to the professional growth of team
Ability to select, improve and apply didactic materials in compliance with discipline content	Progressive knowledge and critical thinking of global problems concerning pedagogy; organization principles and structure of scientific activity, methodology of scientific knowledge	Think and approach the solution of new problems and situations creatively; analyze critically available concepts, theories and approaches to analysis of processes and events; integrate knowledge acquired in different disciplines for the solution of research objectives in new and unfamiliar conditions	Take responsibility for performance and management of research and analysis of problems in the field of pedagogy; adapt new technologies and didactical materials in an inter-disciplinary context; take the initiative in decision-making

Table 5 - Education -- Learning outcomes
Doctoral Level

Competence	Knowledge	Skills	Autonomy and responsibility
Ability to apply analysis and synthesis	Knowledge of scientific methodology for process management; unconventional thinking methods; scientific terms and categories of analysis and synthesis; interdisciplinary scientific research	Provide own conclusions and opinions concerning advanced research trends; analyze best practices of logical and critical thinking; make a synthesis of new approaches in theoretical and experimental research and apply risk management techniques in these processes	Demonstrate proactivity and ability to manage risks, and to manage scientific and research projects
Ability to plan and arrange educational process	Knowledge of innovative scientific approaches in the organization and planning of educational process at the international level; strategic and approach papers in the field of pedagogy; interdisciplinary methods of scientific research within the framework of globalization and internationalization in the field of pedagogy	Apply unconventional approaches to generating pedagogical knowledge; manage processes in nonstandard conditions; maintain effective relationships with state and other educational institutions at the international level	Establish new methods and criteria of educational process assessment and development; organize a team and be responsible for results achievement by the team
Ability to select, improve and apply didactic materials in compliance with disciplinary content.	Knowledge of modern tendencies, approaches and patterns of scientific development within the framework of globalization and internationalization; latest methods and technologies of research	Judge with a critical mind and develop educational programmes; introduce results of implemented scientific research to the educational process; plan, organize and correct scientific and research, experimental and research activity in the field of pedagogy	Generate new scientific ideas; provide own knowledge and ideas to the scientific community extending the frontiers of scientific knowledge; plan and predict further professional self-development

9. Conclusions

These key guidelines for the “Education/Pedagogy” subject area, developed using the Tuning approach, on the basis of a broad consultation in the five Central Asian countries, with reference to the international frameworks, can be usefully taken into consideration when developing Education programmes of any kind.

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ENGINEERING

1. Introduction

The Tuning project was originally designed to find agreed ways of improving the quality of higher education by shifting emphasis to the needs of society and how to guarantee that the formation students receive prepares them for professional life, as well as for citizenship and personal growth. It was designed and carried out by Universities, as their independent contribution to the Bologna process and to the development of a competence-based student-centered approach. Creation of educational programmes and modules of training in terms of output (what will the graduate know, understand, be able to do?) instead of input (what will I teach the student?) creates conditions for greater transparency of qualifications, facilitates recognition and enables all world regions to communicate with each other.

Tuning has now been carried out in all continents. TuCAHEA is the Tuning project for Central Asia. The project has the effect of bringing Central Asian higher education closer to the European Area of Higher Education (EHEA), but its most important aim is to create a Central Asian Area (CAHEA) taking into account the specific needs and potentials of the region and the partner countries.

Engineering is an area of human intellectual activity, a discipline, a profession, whose task is the application of science and technology, within the law and the norms for the use of natural resources to solve specific problems, and achieve specific goals and objectives of mankind. The "Engineering" Subject Area in the Tuning framework has been developed in other countries and macro-regions (Europe, Latin America, Russia, and Africa), and also in the Kyrgyz Republic (2005-2007).

Tuning in five Central Asian countries aimed at development of the structure of educational programmes and the identification of general and subject specific competences in Engineering programmes, in spite of the fact that in these countries, higher education is at different stages of development.

The transition to the three-cycle higher education format (Bachelor-Master-Doctor) has been or is being introduced in Kazakhstan, Tajikistan, and Uzbekistan. In this context, Universities are given academic freedom in determining the modules that constitute their courses of study, using ECTS credits as a measure of workload. The ECTS system was introduced, freedom in the choice of the elective components of educational modules has been given to the students and modern learning technology was introduced and is being perfected.

Kyrgyzstan and Turkmenistan have also begun the reform of postgraduate education according to a three tier model. At present the second level of training Master's degree programme has been implemented in Kyrgyzstan and a pilot programme for the preparation of the PhD is being carried out.

The recommendations formulated by the TuCAHEA Engineering Subject Area Group will help to define approaches for the development of a general strategy for

training professionals in Engineering who are competitive in the global labor market. These recommendations are based on Tuning methodology, and include the formulation of comparable competences and learning outcomes. They will not only contribute to enhancing the quality and relevance of Engineering higher education in Central Asia, but also facilitate the mutual recognition of diplomas and of study components.

2. Description of the subject area

We can define Engineering as works or services of an applied nature. Engineers, in the practice of their profession, normally carry out many problem-related tasks, including pre-feasibility studies and justification of planned investments, laboratory and experimental refinement of technologies and prototypes for industrial elaboration, and subsequent engineering services and consultation. There are various branches of Engineering, topical today and necessary for human life and activity.

Engineers form an important component of the workforce in all 5 Central Asian countries. Engineering is a prestigious profession and engineers are much in demand. Growth of a demand for engineering specialties is registered for example:

- in Tajikistan: civil engineering, power engineering, information technology (IT);
- in Kyrgyzstan: power engineering, civil engineering, agro-engineering;
- in Kazakhstan: construction engineering, mining, mechanical engineering, nanoengineering, oil and gas chemistry engineering, power engineering, architecture, technology of woodworking, production of building materials, products and designs, geodesy, agro-engineering, bioengineering, etc.;
- in Turkmenistan: electrochemical engineering, technology of building materials, mining, mechanical engineering;
- in Uzbekistan demand for job production sphere has been become the most popular, also experts in the field of web-development and information technology.

Steady demand for qualified professionals is registered in the construction industry. For this reason it will be necessary for graduates not only to understand the main processes of construction, but also to manage work groups, as well as possessing special software skills and modern methods of project management for construction. For the economies of the Central Asian countries the preparation of qualified engineering personnel is one of the most important priorities, because many key branches of production require highly qualified engineers.

In all Central Asian universities at present the structure of engineering programmes are similar. In the curricula there are 5 blocks which define the structure of undergraduate Engineering education:

1. Humanities and social and economic disciplines;
2. Mathematical and natural sciences;
3. General professional disciplines;
4. Special disciplines;
5. Additional discipline.

The curricula include training, introductory, production and pre-diploma practice.

The key element in the training of engineers is knowledge of the natural and physical sciences, in particular mathematics, physics, and chemistry.

For example, for the Bachelor degree programme in “Civil engineering”, the basic components that form the professional disciplines are: descriptive geometry, engineering graphics, engineering geology, building materials, electrical techniques and equipment, resistance of materials, life safety, architecture, etc.

Construction (engineering) mechanics, engineering systems, design and calculation (ferroconcrete design, metal design), modern computer calculations, technology of construction production, calculation of seismic buildings, inspection and reconstruction of constructions, etc., constitute special disciplines depending on the degree profile.

The development of new ideas, scientific preparation of engineering staff, creative solution of engineering and technical problems, searching for new ways of production are priorities for training for the Master's degree (2nd cycle) and particularly important for the doctoral degree (3rd cycle).

Accordingly, “History and philosophy of science”, “Basics of scientific research” are taught at the second cycle level. At the doctoral level, high scientific skills are developed by such disciplines as “Innovative activity”, “Methodology of scientific research”, “Globalization and regional problems in studying scientific and educational area”, “Modern energy-saving technology”.

In all countries of Central Asia there is a similar scheme of Engineering curricula. At the same time the students have the right to choose elective disciplines.

3. Degrees typically offered at the three cycle levels

In the Republic of Kazakhstan 3-level higher education programme have been introduced.
The first cycle in the training of engineers is the Bachelor, which gives the specific academic degree of “Bachelor of Engineering”.
The second level in engineering training is the Master’s degree, which is divided into:

- a track which leads to the award of the academic degree of Master in Engineering and Technology;
- a scientific and pedagogical track which leads to the award of the academic degree of Master of Science.

The third level of Engineering training, the doctorate, is at present only available in Kazakhstan, which gives Doctor’s degree (PhD).

In Uzbekistan, the 3-level higher education framework (Bachelor- Master’s - PhD) was introduced in 2012. In Uzbekistan Higher Education has two levels:

Undergraduate, graduate and postgraduate education system, with a single-stage defense of a thesis and award of the Doctor's degree (PhD).
Undergraduate: basic Higher Education of training of at least 4 years. At the end of the Bachelor programme graduates are awarded the "Bachelor" degree and a state diploma.
Graduate: graduate with fundamental and applied knowledge in a specific specialty (field of study) after training of at least 2 years. After admission the Master's programme graduates based on the results of the state certification are awarded the Master's degree in a specialty (field of study), and a state diploma.
After graduating Master's degree applicants to doctoral (PhD) studies must have 2 years of work experience in a specialty. After admission during the first year of study theoretical and methodological training is offered in the chosen specialty.

In Tajikistan, the first level, Bachelor, lasts for 4 years; at Master's, second level, there are no degree programme for specific tracks or profiles.

Turkmenistan has not fully implemented the three tier system. However, activities are on the road to aligning with world standards.

In Kyrgyzstan and Turkmenistan doctoral studies (third cycle) are designed according to the old scheme (Soviet), which is under reconstruction.

This is clearly shown in Table 1.

Table 1 - Comparative information of Degrees typically offered in Engineering in Central Asia

Cycle	Academic degree	Training term
First level – Bachelor degree	**Bachelor of science in Engineering** Kazakhstan Tajikistan Kyrgyzstan Uzbekistan Turkmenistan	 4 years 4 / 5 years 4 years 4 years 5 years
Second level – Master's degree	**Master of science in Engineering** Kazakhstan Tajikistan Kyrgyzstan Uzbekistan Turkmenistan	 1/1,5/2 years 2 years 2 years 2 years 2 years
Third level – Doctoral studies	**Doctor of science in Engineering (PhD)** Kazakhstan Uzbekistan Kyrgyzstan Tajikistan and Turkmenistan: - postgraduate study which leads to the	For all countries of Central Asia – 3 years

	award of the academic degree of Candidate of science. - doctoral degree which leads to the award of the academic degree of Doctor of science.	

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4. Typical occupations of graduates at the three cycle levels

In all Central Asian countries the most popular occupations in this subject area are: engineer and engineer-technologist. Those who complete the first cycle, graduates who hold the Bachelor degree, can work as engineer, designer (architect, civil engineer), as a research assistant in research laboratories, managers, or continue their education at the Master's level.

The graduates of the second cycle (Master's Degree) can work in industry as an engineer or as a project director, continue their education at the doctoral (PhD) level, or teach in colleges and universities.

Third level graduates (PhD) can work in research institutes and centers, carry out educational activities at universities as head of a department, faculty, or university. Education at the third level requires the active involvement of doctoral students in a scientific field. They must be able to generate new ideas, implement innovative projects and/or achieve high-valued technological, technical and scientific results.

5. The subject area competences; the most relevant competences

Based on a consultation with four stakeholder groups, students, faculty, alumni and employers, as well as a result of discussions in the working group, we identified the ten general competences and the ten subject specific competences, which have the highest priority for all respondents.

To select the most important general competences for the four groups, we used the evaluations relative to the following list of 30 general competences agreed for all Central Asian countries:

GC1 Ability to analyze and synthesize
GC2 Ability to use logical and critical thinking for solving problems
GC3 Ability to model, design and forecast
GC4 Ability to carry out research applying appropriate methods
GC5 Ability to take initiatives and entrepreneurship
GC6 Ability to innovate
GC7 Ability to develop general knowledge
GC8 Ability to learn including autonomous learning
GC9 Ability to communicate interactively and receive feedback
GC10 Knowledge of the professional field
GC11 Ability to communicate in multicultural context
GC12 Ability to communicate in official state, Russian and foreign languages

GC13 Ability to lead people and work in a team
GC14 Ability to manage information
GC15 Ability to use information and communication technologies
GC16 Social responsibility
GC17 Ability to follow a healthy lifestyle
GC18 Ecological and environmental responsibility
GC19 Knowledge of the laws
GC20 Ability to prevent and resolve conflicts
GC21 Patriotism and preservation of own cultural values
GC22 Tolerance and respect for others
GC23 Commitment to quality results
GC24 Flexibility
GC25 Ability to apply knowledge in practice
GC26 Orientation toward the needs of the user
GC27 Ability to work autonomously
GC28 Ability to adapt to change
GC29 Ability to make decisions
GC30 Time-management

NUMBER OF RESPONDENTS: GENERIC COMPETENCES

	Academics	Employers	Students	Graduates	Total
No area	662	106	740	195	1703
Business	434	123	682	172	1411
Economics	396	125	647	182	1350
Education	459	226	581	248	1514
Engineering	386	147	499	162	1194
Environment Protection and Food Safety	332	163	474	242	1211
History	319	86	218	111	734
Language	293	129	391	194	1007
Law	281	121	534	128	1064
Total	3562	1226	4766	1634	11188

On the basis of the responses to the consultation questionnaire, discussions with stakeholders and other interested parties, and also in view of the working group's opinion, certain general competences were indicated according their importance and degree of realization in the field of Engineering. The ones selected were:

Table 2- Key General Competences in the area of Engineering in Central Asia

GC7 Ability to develop general knowledge
GC10 Knowledge of the professional field
GC25 Ability to apply knowledge in practice
GC14 Ability to manage information
GC23 Commitment to quality results
GC3 Ability to model, design and forecast
GC4 Ability to carry out research applying appropriate methods
GC17 Ability to follow a healthy lifestyle
GC12 Ability to communicate in official state, Russian and foreign languages
GC15 Ability to use information and communication technologies

To select the most relevant subject specific competences for the four stakeholder groups (academics, employers, students, and graduates) the consultation also considered the following 25 subject specific competences:

SC1 Ability to perform engineering and technical and economic calculations
SC2 Ability to design and construction
SC3 Capacity for spatial reasoning
SC4 Ability to mathematical modeling
SC5 Ability to solve practical engineering problems
SC6 Ability to identify hazardous and harmful factors and guarantee safety
SC7 Ability to classify and to assess the quality and types of materials, structures and constructions
SC8 Ability to identify and troubleshoot processes and technical systems
SC9 Knowledge and ability to use national and international standards in industry
SC10 Ability to professional relationships in an international context
SC11 Ability to use innovative technologies and new materials in the industry
SC12 Basic knowledge of the legal and financial documentation in the industry
SC13 Ability to predict the environmental consequences of projects and processes
SC14 Knowledge, development and implementation of automated control systems
SC15 Ability to formulate and solve scientific problems, conduct research to obtain new scientific and practical results
SC16 Ability to generalize and use scientific achievements in addressing industry challenges
SC17 Ability to teaching and transfer of professional knowledge
SC18 Ability to use information technology, software in the industry
SC19 Ability for self-improvement and self-development in profiling and teaching activities
SC20 Ability to give priority to domestic resources and their rational use
SC21 Ability to create new technical and technological processes using local resources and materials
SC22 Ability to adapt to the characteristics of the engineering design of cultural and ethnic backgrounds
SC23 Ability to use relevant knowledge infrastructure in the planning and forecasting of engineering projects
SC24 Ability to comply with a code of engineering ethics
SC25 Ability to make a trend of sustainable development, taking into account profiling activities (product development, components and engineering processes).

NUMBER OF RESPONDENTS: SPECIFIC COMPETENCES

	Academics	Employers	Students	Graduates	Total
Business	462	123	676	169	1430
Economics	401	125	628	179	1333
Education	403	293	524	238	1458
Engineering	363	143	461	160	1127
Environment Protection and Food Safety	322	123	451	191	1087
History	305	78	199	97	679
Language	266	134	342	183	925
Law	364	116	564	126	1170
Total	2886	1135	3845	1343	9209

On the basis of the results of the consultation with the stakeholders and of the opinion of the working group the 10 most important subject competences in the direction of Engineering were chosen:

Table 3- Key Subject Specific Competences in the area of Engineering in Central Asia

1. Ability to use innovative technologies and new materials in the industry – SC11
2. Ability to solve practical engineering problems – SC5
3. Capacity for spatial reasoning – SC3
4. Ability to predict the environmental consequences of projects and processes – SC13
5. Ability to make a trend of sustainable development, taking into account the profiling activities (product development, components and engineering processes) – SC25
6. Ability to perform engineering and technical and economic calculations – SC1
7. Ability to formulate and solve scientific problems, conduct research to obtain new scientific and practical results – SC15
8. Ability to identify and troubleshoot processes and technical systems – SC8
9. Ability to classify and to assess the quality and types of materials,structures and constructions – SC7.

6. Cycle level descriptors (with reference to Qualifications Frameworks) in terms of competences

The term 'descriptors' refers to the description of the level and scope of knowledge, skills and competences acquired by students by the end of educational programme on each level (stage) of higher and postgraduate education. The descriptors are based on learning results, competences formed, and also, where appropriate, on total number of ECTS credits (credit points) awarded. In the subject specific competences the following categories are reflected: knowledge, skills, and level of autonomy or responsibility.

6.1. The first cycle (Bachelor) courses: subject specific competences:

The Bachelor will:

- have basic, professional and advanced knowledge;
  understand the principles of scientific research;
- have knowledge of emerging technologies related to their specialization.
  be able to develop general knowledge;
- know modeling, design and forecasting;
- communicate in the state and Russian languages, and in a foreign language use ICT;
- employ spatial reasoning;
- perform engineering and technical and economic calculations;
- identify and troubleshoot technical and technological processes;
- individually apply knowledge in practice;

- manage information;
- focus on quality achievement of goals;
- have a commitment to a healthy lifestyle.

6.2. The second cycle (Master) courses: subject specific competences

The Master's graduate will:

- have deep knowledge of mathematical and computer models;
- know the basics of specialized scientific and advanced engineering methodology and research activities;
- possess knowledge of innovative technologies and new materials in the industry;
  apply methods of design and integrate knowledge from different fields;
- manage the design process and evaluation of the results;
- develop innovative engineering projects, products, materials, etc.;
- apply a systematic approach to engineering problems;
- demonstrate a deep understanding of the scientific principles of specialization and related disciplines;
- navigate to the scientific, engineering and technical environment;
- take responsibility for the technical professional development and for the fulfillment of) the results;
- anticipate the environmental impacts of projects and processes;
- take into account the sustainable development of the profiling activities (product development and engineering processes).

6.3. The third cycle (postgraduate and doctoral) study: subject specific competences

The Doctoral (PhD) will:

- have the latest knowledge and technology in the professional field as well as in the related field;
- have advanced knowledge on methods and research methodology;
- analyze scientifically the most advanced engineering and technical information;
- formulate and solve scientific problems,conduct research to obtain new scientific and practical results;
- implement on a qualitative level the organization and management of the process of design, adapt and apply them in new and unpredictable situations;
- analyze scientifically the most advanced engineering and technical information;
  formulate and solve scientific problems, conduct research to obtain new scientific and practical results;
- implement on a qualitative level the organization and management of the process of design, adapt and apply them in new and unpredictable situations;
- demonstrate creativity and innovation in the synthesis of solutions and development projects;
- have a high level of professional ethics;
- present, discuss and defend individual scientific results in an international context.

Table 4 - Examples of engineering competences by level of study

Level	Knowledge	Skills	Autonomy and responsibility
BA	Possession of basic, professional and advanced knowledge; Know the principles of scientific research; Have knowledge of developing technologies related to their specialization.	Perception and knowledge development; Modeling, design, and forecasting; Communication in the state and Russian languages, and in a foreign language; Use of ICT; Spatial thinking; Perform engineering and technical and economic calculations; Identify and troubleshoot technical and technological processes.	Individually apply knowledge in practice; Manage information; Focus on quality goals; Be committed to a healthy lifestyle.
MA	Deep knowledge of mathematical and computer models; Know the basics of specialized scientific and advanced engineering methodology and research activities; Possess knowledge about innovative technologies and new materials in the industry.	Apply the methods of design and integrate knowledge from different fields; Manage the design and evaluation of results; Develop innovative engineering projects, products, materials, etc.; Have a systematic approach to engineering problems.	Demonstrate a deep understanding of the scientific principles of the specialization and related disciplines Navigate the scientific and engineering environment; Take professional responsibility for the technical development and for the fulfillment of the results; Anticipate the environmental consequences of projects and processes; Take into account sustainable development profiling activities (product development and engineering processes);

PhD	Possess the latest knowledge and technology in their professional field as well as in related fields; Have advanced knowledge of methods and research methodology.	Analyze scientifically the most advanced engineering and technical information; Formulate and solve scientific problems, conduct research to obtain new scientific and practical results; Carry out on a qualitative level the organization and management of the process of design; Adapt and apply them in new and unpredictable situations.	Demonstrate creativity and innovation in the synthesis of solutions and development projects; Have a high level of professional ethics; Submit, discuss and defend one's individual research results in an advanced international context.

7. Approaches to learning, teaching and assessment

In all Central Asian countries the student workload of the educational programme is determined summing theoretical training, practical training, course projects (works), degree projects, final papers, preparation and passing the final certification, which is usually expressed in credits (except in the institutions in the field of health care).

Table 5 - Workload for Bachelor programmes in Central Asia

Country	Status of credits	Credits per year	Student work load per year
Kazakhstan	Using ECTS credits	240	7140 hours (128-136 weeks)
Kyrgyzstan	Using ECTS credits	240	7200 hours (128-136 weeks)
Tajikistan	The universities are implementing the ECTS credit system	240	6400 hours (128-136 weeks)
Uzbekistan	Universities do not apply the credit system, but a "rating" system based on student workload	-	9072 hours (172 weeks)
Turkmenistan	The universities do not apply the credit system	-	9240 hours (220 weeks)

Educational activity of the student in all Central Asian countries is assessed through current, intermediate and final evaluations (rating, exams, course projects, diploma thesis).

Monitoring in the educational process is a systematic quality control on students' knowledge and competences, which traces the dynamics of learning outcomes. Evaluation can also serve as a quantitative measure of the quality of teaching considering students' achievements as its result. At the moment in Kazakhstan uses an assessment system corresponding to the world standards.

7.1 Methods used in each country, in each institution today.

All universities of the 5 Central Asian countries use teaching methods and evaluation of results which are comparable with each other. Modern didactics in the higher education of these countries provides experience in both teaching and assessment methods.

We may highlight the traditional (classical) training methods that have international status: lectures, seminars, colloquia, practicals and traneeship including scientific research (individual, group, team), laboratory work, project implementation.

With the implementation of the credit system, the educational process has come to include the realization of student individual work, student individual work with the teacher and ratings. Many interactive teaching methods are developed: business games, debates (discussions), brainstorming (snowball), role play, video presentations, training and situational decisions, self-study, problem-based learning, computer-based training, lecturing by two lecturers, conducting classes in industry by specialists, case studies etc.

7.2 What kind of knowledge is to be generated based on the selected teaching methods and ways of learning by students?

The educational process in Engineering includes lectures, seminars, practical and laboratory classes and independent work of students (students, undergraduates, doctoral candidates).

For the formation of Engineering skills it is necessary to build a learning process as follows:
At stage 1 (undergraduate) a general group of disciplines is taught, which should not exceed 30% (72 credits) from the total number of 240 credits. This includes, disciplines such as philosophy, languages, basics of economic theory, basics of law, life safety, introduction to entrepreneurship.
Another group of disciplines that form the specific competences comprises 70% or 168 of the total number of credits (240). Special knowledge and competences are formed in profiled disciplines (general professional) such as Mechanical Engineering, Engineering Surveying, Engineering Drawing, etc. Other highly specialized disciplines are studied depending on the profile of the specialty or specialization.
To develop the necessary competences in Engineering, the learner should spend for each hour of classroom work 2 hours in independent search for knowledge.

The following are selected key competences that need to be developed in academic curricula and introduced into the educational process:
SC3 Capacity for spatial reasoning
SC5 Ability to solve practical engineering problems
SC13 Ability to predict the environmental consequences of projects and processes
SC11 Ability to use innovative technologies and new materials in the industry
SC1 Ability to perform engineering and technical and economic calculations
SC25 Ability to make a trend of sustainable development, taking into account profiling activities (product development, components and engineering processes)

Here is an example regarding the general design competence:

GC3 - Ability to model, design and forecast		
1	What does this competence mean?	The concept and its definition should be known. The graduate should: Know the ways of designing. Be able to choose the right way to design. Apply this in practice.
2	How is it learned today?	Studying the subject of descriptive geometry. Studying computer programmes for design: AutoCad, ArcGIS, 3DMax, Corel Draw. Introductory lectures. Practical exercises, SRSP CDS (doing a course project).
3	How could it be learned?	Introduction to the learning process of students. Participation in problem discussions on engineering design. Research work of the student. In the catalogue of elective courses, more courses on computer design could be included.
4	How is it taught today?	Introductory lectures. Practical exercises, student individual work with teacher, student individual work (implementation of the course project).
5	How could it be taught?	More elements of interactive learning can be introduced. Exercise real personal approaches.
6	How can it be assessed?	By judging the result of a particular project work.
7	What criteria can be used?	Originality, accuracy, relevance and cost-effectiveness. The level of efficiency in regard to this competence in computer simulations.

SC8 Ability to identify and troubleshoot processes and technical systems, 1st cycle		
1	What does this competence mean?	The graduate should have an understanding of emerging technologies related to their specialization. And also about the basic normative and legal documents regulating the design processes. He or she needs to: **Know*:*** **-** the basic types of construction machinery and technological

		capabilities; - about modern construction technologies; - know methodical bases; - design of construction processes. **Be able to:** - select sets of machines, ensuring efficient production of construction; - develop the technological process maps and projects of construction works; - to organize a high-performance and high-quality modern construction industry. **Apply this in practice.**
2	How is it learned today?	Studying the subjects: "Mathematics", "Materials and technological construction materials", "Building Materials", "Consumables", "Design and construction in the building with the basics of engineering drawing", "Organization and technical regulation in construction." Development of computer programmes: AutoCAD, ArcGIS, 3DMax, CorelDraw, MS ACCESS, Project, Delphi. MS Excel. Lectures. Practical classes, independent student work.
3	How could it be learned?	Introducing into the learning process students' participation in problem discussions and the participation of students in innovative projects in materials engineering. Research work of students.
4	How is it taught today?	Lectures, practical classes, independent work of students.
5	How could it be taught?	Lecture (introductory lecture, lecture-presentation); Practicals (simulation, work in small groups to discuss specific situations, the use of video); Research (doing homework, analysis and expert evaluation of projects); Self-study by students.
6	How can it be assessed?	According to the results of presenting specific design and calculation work. According to the results of engineering and technical-economic solutions .According to the scheme of product development and production.
7	What criteria can be used?	In this competence use thresholds and standard criteria.

SC11 Ability to use innovative technologies and new materials in the industry – 1st cycle		
1	What does this competence mean?	The graduate should have an understanding of emerging technologies related to their specialization. As well as the basic normative and legal documents regulating the design processes. He or she needs: **Know*:***

		- the main types of construction machineryand technological capabilities; - modern production technologies and methodical bases of designing building processes. **Be able to*:*** - choose sets of machines, ensuring efficient construction industry; - develop the technological process maps and projects of construction works; - organize a high-performance and high-quality modern construction industry. **Apply this in practice.**
2	How is it learned today?	Study of disciplines:"Mathematics", "Materials science and technologyconstruction materials", "Building materials", "Consumables" «Design and constructionin the buildingwith the basics ofengineering drawing"," Organizationandtechnical regulationin construction "; Development ofcomputer programmes: AutoCAD, ArcGIS, 3DMax, CorelDraw, MS ACCESS, Project, Delphi. MS Excel. Lectures. Practical exercises. Independent study.
3	How could it be learned?	Introduction into the learning process of students' participation in problem discussion and the participation of students in innovative projects in engineering construction. Research work of students.
4	How is it taught today?	Lectures, practical classes, independent work of students.
5	How could it be taught?	Lectures (introductory lecture, lecture-presentation); Practical (simulation, work in small groups to discuss specific situations, the use of video); Research (personal work, analysis and expert evaluation of projects); Government (independent work of students).
6	How can it be assessed?	As a result of submission of project-specific computational work. According to the results of engineering, technical and economic decisions. Under the scheme of development and launch of new products.
7	What criteria can be used?	In this competence threshold standard criteria can be used.

Example of development of General and Subject Specific competences in a particular course unit.

Course "Engineering Mechanics III". Teaching is conducted according to the principles of the active approach to learning through action and reflection, thought and experience, which involves the use of active forms of teaching / learning.

Subject: Calculation of multi-span statically determinate beams to fixed and mobile action - 2:00 hr.

Task: Construct diagrams of shear force and bending moment for a multiple-statically determinate beams.
Generic competences formed:
- GC 1; GC 2; G 7 (ability to analyze and synthesize, ability to use logical and critical thinking for solving problems, ability to develop general knowledge).
Subject specific competences formed: SC1; SC 5; SC 18 (ability to perform engineering, technical and economic calculations, ability to solve practical engineering problems, ability to use information technology, software in the industry).

Expected learning outcomes	Approaches to teaching methods	Form of evaluation
The ability to analyze the structure of the beam	Analysis and synthesis, reading the drawing (scheme)	Quizzes
The ability to produce practical calculations of single-span beams on the basis of knowledge and understanding how to perform the calculations and use of computer programmes;	Solution of practical tasks, using of computer programmes - "Lira», AutoCAD	Analysis of oral and written responses. Assessment of quality of a graphic work
To be able to build diagrams for a multiple-span beam by reducing diagrams for single-span beams on the same horizontal	AutoCAD	Critical analysis of the work. Defense of the results.

7.3. Methods for assessing

In all Central Asian countries assessment of general and special (professional) knowledge is carried out according to the following typologies:
1) Continuous checks
2) Mid-term tests
3) Final exams
4) Self assessment

Evaluation methods:
1) Tests are provided on computers. For example: for each discipline a test is composed, and these tests are loaded at a specialized computer center - Department of Distance Education and Testing (DDOT). They are also posted on the web-site of the teacher, in the electronic teaching complex (EUMKD), where there is free access for students. Today this system provides objective evaluation

and self-assessment. In a 3-credit discipline this includes 360 test items, thus covering all the topics of the course as well as involving the student's individual work.
2) The quiz can be done in individual and group form and be carried out during the seminars and workshops, or colloquia. A modern interpretation of the quiz can be a business conversation or role play, or an essay, during which the student shows the depth of the knowledge learned in free thinking and decisions about situational or production tasks, laboratory work can demonstrate the practical value of the competences formed. The quiz can be either written or oral.
3) The specific nature of engineering specialties suggests that a relevant kind of assessment of knowledge is the solution of graphics tasks, modeling (including computer) design in AutoCAD, 3D, etc.
4) Exam, mostly on the computer or a combination (written and oral).
5) Midterm tests
6) Scientific research (project, thesis).
7) Academic Mobility. Today this type of evaluation is very important: by participating in a mobility programme student can actually and objectively evaluate the quality of their knowledge, skills and competences.
8) Evaluation by employers (questionnaires, interviews, discussions, analysis of employment statistics, university rankings, independent audit).

7.4. How do the competences influence knowledge in the programmes developed? How can our teaching methods, assessments help the student achieve his/her goals? Do the goals correspond to international standards?

This is a very important problem of teaching methods, assessment of knowledge and competences. At the first level, undergraduate, where students receive general and some subject specific knowledge, many traditional and modern teaching methods are used, such as evaluation of knowledge during independent work, tests, quizzes and examinations, term papers and diploma projects. One of the highlights for quality assurance should be the realization by the teachers that the clarity of the structure of the educational programme, and clarity and transparency in the assessment methods motivate and orientate the students in the study process. In this regard, a lot depends on the level of qualification, the evolution of the teacher and his/her methods and means of education. Still it is necessary to take into account the students' opinions about the quality of the learning/ teaching/ assessment process, and to know whether they have reached the result they wanted.

At the second level, although graduates still build general knowledge (history of philosophy and science, management, pedagogy, psychology) and special (subject specific) knowledge, they are more focused on research. Assessment of their knowledge is primarily done though evaluating the results of their master's research, on whether they have written scientific articles in prestigious specialized journals, held scientific internships, prepared dissertations. There is a form of objective verification of their competences acquired during training, which depends on career development and recognition of professionals.

The third level, the Doctorate (PhD) involves the minimum level of universal knowledge, e.g. knowledge of professional languages. The main characteristic of doctoral education and research is that it is highly specialized and related to the field of research in the profile. Assessment of knowledge regards not only the specific subject, but primarily the evaluation of research competences, by means of the publications, academic essays, research projects, reports, scientific training and the actual PhD thesis.

General methods of assessment:
- Written, oral, computer exams
- Research reports
- Theses, articles, reports
- Portfolios
- Business games
- Final exams
- Writing work (essays, thesis)
- Final thesis.

8. Cycle Level Descriptors (with reference to Qualifications Frameworks) in terms of Learning Outcomes

Examples of learning outcomes depending on the level (cycle) of instruction:
First Cycle (level) of education, Bachelor: Demonstrate and implement the knowledge and skills of practical orientation.
Second Cycle (level) of education, Master: Demonstrate and implement the knowledge and skills of practical, pedagogical, scientific orientation.
Third Cycle (level) of education, Doctorate (PhD): Demonstrate and implement the knowledge and skills of practical, pedagogical, scientific orientation to implement research, training of scientific and pedagogical staff.

The engineer will be able to:
1. Demonstrate basic, professional and advanced knowledge and apply it in practice;
2. Know the principles of scientific research;
3. Have knowledge of emerging technologies related to his/her specialization;
4. Model, design and forecast.
5. Perform engineering and technical-economic calculations.

The engineering graduate should reach the following learning outcomes at the various levels:

Level	Competence	Result of training (Learning Outcome)
1st cycle Bachelor	**Ability to develop engineering solutions**	**Know and understand:** - how to analyze existing solutions and apply an effective solution. **Be able to:**

		- accompany the chosen solution with technical and economic substantiation; - implement into practice developed engineering solution.
2nd cycle Master		**Know and understand:** - how to carry out scientific and technical analysis of engineering solutions and offer a new solution. **Be able to**: - prepare scientific and technical substantiation for solving engineering problems; - introduce scientific and technological results into practice and teaching activity.
3rd cycle Doctorate		**Know and understand:** - how to carry out critical analysis independently in order to obtain new scientific results in solving engineering problems (development projects). **Be able to**: - conduct research to develop engineering solutions for the development of scientific and technical progress.

Level	Competence	Learning Outcome
1st cycle Bachelor	**Ability to anticipate the environmental consequences of projects and technological processes**	**Know and understand**: - problems and peculiarities of environmental hazard of projects and technological processes. **Be able to**: - anticipate the environmental consequences of developed projects and adopted technological processes.
2nd cycle Master		**Know and understand:** - innovative solutions for environmental risks of projects and technological processes. **Be able to:** - be responsible for environmental solutions of designed projects and technological processes.
3rd cycle Doctorate		**Know and understand:** - scientific approaches in solving environmental problems in projects and technological processes. **Be able to**: - develop, substantiate and implement new scientific solutions to prevent environmental consequences of projects and technological processes.

Level	Competence	Learning Outcome
1st cycle Bachelor	**Ability to make a trend of sustainable development, taking into account profiling activities (product development, components and engineering processes)**	**Know and understand:** - concepts and principles of sustainable development taking into account the professional engineering activity; - social and economic interactions, mechanisms of interaction with other spheres for sustainability ensuring; **Be able to:** - solve tasks for the conservation of sustainable development taking into account profiling activity; - analyze independently critical situations, problems of production and products.
2nd cycle Master		**Know and understand:** - sustainable development strategy in profiling activities. **Be able to**: - inform society about scientific achievements in solving sustainable critical problems; - apply chaos theory to resolve questions of sustainable development.
3rd cycle Doctorate		**Know and understand:** - scientific approaches to sustainable development trends in engineering. **Be able to:** - conduct research and analysis aimed at the sustainable development of profiling activity; - solve methodological and research problems connected with sustainable development; - integrate advanced scientific achievements with current practical experience in solving the most complicated problems of professional sector stability in their profession.

Level	Competence	Learning outcome
1st cycle Bachelor	**Ability to use innovative technologies and new materials in the industry**	**Know and understand:** - innovative technologies and new materials in the industry. **Be able to:** - choose new materials and innovative use of existing technology.
2nd cycle Master	**the ability to use existing and emerging technical methods,**	**Know and understand:** - the scientific basis for the use of innovative technologies and new materials in the industry. **Be able to:** - analyze the applicability of new materials in the

	techniques and tools.	industry and research to justify innovative technologies.
3rd cycle Doctorate		**Know and understand:** - trends in the development of innovative technologies and new materials. **Be able to:** - develop innovative technologies and new materials to meet the needs of production and advances in science and technology.

Level	Competence	Learning outcome
1st cycle Bachelor	**Ability to perform engineering and technical-economic calculations**	**Know and understand:** - progress in solving engineering and technical-economic calculations; - analysis of existing solutions and implement an effective solution. **Be able to:** - accompany the implementation of engineering and technical-economic calculations; - put into practice a developed engineering solution; - keep high internal standards of quality of work; set ambitious but achievable goals; - compare achievements with targets; - develop spiritual and intellectual self-knowledge, self-development and self-regulation.
2nd cycle Master		**Know and understand:** - scientific and technical basis for engineering and feasibility of solutions and propose a new solution. **Be able to:** - prepare scientific and technical justification for solving engineering problems; - introduce scientific and technical results in the practice and teaching activities; - understand and use in scientific and industrial and technological activity categories, laws, techniques and forms of scientific knowledge, the basic concepts of the philosophy of technology.
3rd cycle Doctorate		**Know and understand:** - innovation and development trends in engineering calculations; - apply their own critical analysis in order to obtain new scientific results in the solution of engineering problems.

		Be able to: - conduct research to develop engineering solutions for the development of scientific and technical progress; - search for, analyze and select relevant information, organize, convert, store, and transmit it; - structure knowledge,expand and adapt it to adapt to new situations and enrich the store of knowledge through experience; - choose one's own path of education.

Level	Competence	Learning outcome
1st cycle Bachelor	**Ability to formulate and solve scientific problems, conduct research to gain new scientific and practical results**	**Know and understand:** - the state of development of science and how to formulate research results; - independently formulate current and ultimate goals of the project, to seek the most appropriate technical and design ways to solve them; - how to collect and analyze the raw data for the design of products; - how to develop projects for products based on utilitarian and technical, artistic, aesthetic, economic parameters; - how to develop the project, and the working and technical documentation. **Be able to:** - analyze scientific and technical information, national and international experience, to take part in research to improve processes and equipment, apply the results in practice; - prepare presentations, scientific and technical reports and reports on the results of the research; - carry out professional activities with the use of traditional and innovative technologies in the design and manufacture of products.
2nd cycle Master		**Know and understand:** - The means and methods of solving tasks in scientific research in the field of engineering; - Methods of organizing and carrying out research work in the field of engineering; - Ways of handling empirical data obtained and interpretating it. **Be able to:** - justify the chosen research area; - choose the means and methods for solving the

		problems in scientific research, use of research techniques; - have a reasoned opinion on the results of research, including in the form of scientific reports and publications; - conduct scientific debate, without violating the laws of ethics, logic and reasoning rules; - select methods for solving tasks in scientific research; - organize and conduct research work in the field of engineering, using modern and classical methods of analysis of experimental data and their analysis; - make informed conclusions and recommendations based on the results of the research.
3rd cycle Doctorate		**Know and understand:** - research methods and experimental works; - methods of analysis and processing of experimental data; - information technology in scientific research, software products related to the professional field; - requirements for registration of scientific and technical documentation. **Be able to:** - formulate and solve problems arising in the course of research activities and requires in-depth expertise in the field of system analysis and management principles; - choose appropriate research methods, modify existing and develop new methods based on the objectives of a particular research; - process the results, analyze and interpret them according to the data available in the literature; - conduct bibliographical work using modern information technologies; - independent planning and research, requiring a broad education in the appropriate direction of system analysis and management.

Level	Competence	Learning outcome
1st cycle Bachelor	**Ability to identify problems and troubleshoot processes**	**Know and understand:** - structure and working principle of technological processes and technical systems and possible problems; know the sequence of the design objects;

	and technical systems	- modern means of automation, the conditions for their use. **Be able to:** - identify and troubleshoot processes and technical systems; have the skills to find faults in the control and correct the fault; - improve own's knowledge for the development of new technical means of automation; - gain experience in operation of automation systems; - examine the technical documentation to carry out maintenance work to ensure efficiency of automation systems; - keep records on meteorological reporting gauges; - determine the range of parameters that must be measured to ensure quality control, and facility management.
2nd cycle Master		**Know and understand:** - design features of the device engineering systems and processes and potential problems and ways to address them; - the influence of process parameters on the quality of the product; - the difference between defects arising from changes in the properties of the material, machine parameters, production processes, and product design. **Be able to**: - analyze the work process of technical systems and identify potential problems and ways to overcome them; - perform the composition and decomposition of technical systems of medium difficulty with identifying the main functional relationships; - identify the most important physical processes and patterns to choose adequate mathematical models in the analysis of technical systems.
3rd cycle Doctorate		**Know and understand:** - all stages of the process, have experience setting up, maintening and troubleshooting industrial automation systems and processes. **Be able to:** - explore and identify problem processes and technical systems apply the latest advances in science and technology.

9. Conclusions

The comparative analysis of the current state of Engineering education in the Central Asian countries allows us to identify the general tendencies of development and reforms, to understand the reasons for divergences and to indicate a way to approach the task of putting our systems into a framework of international standards. Work on allocation of the general and subject competences is a very important aspect for training graduates according to a specific engineering profile and for the definition of the requirements for their qualification corresponding to the level of their preparation.

We must note that there are many more important competences beyond those mentioned here. Each degree profile will develop many of the ones we have analyzed, and some others as well. We may think of the competences relevant for each specialty as a circle, larger or smaller, which overlaps somewhat with those of other specialties.

Of course each competence must be developed to a higher or lower degree according to the special area or track. Minimum levels of the general and subject competences which we develop can be defined, and will be different in different contexts. Considering each specialty, the circle of competences can be enlarged or narrowed, to reflect the specifics of a each engineering profession. In conclusion we must remember that that countries involved participate at different levels in the Bologna process and use to a greater or lesser extent the Dublin descriptors in their national education systems. Furthermore there are some differences in legislation and the development of national legal systems of the countries of Central Asia.

Our project helped to find a common desire for cooperation and convergence, promotion of European and international principles and ideas in higher education in each of the participating countries. It gave another opportunity to assess engineering education critically in each of our countries, to discuss and interact with specialists and researchers. This is an invaluable experience and had led to the development of a competence approach in higher education.

10. Members of the Subject Area Group

Co-Chairs:
Sharabidin Amatov (Kyrgyzstan)
Batzhamal Abilova (Kazakhstan)
Members of the group:
Anara Baisariyeva (Kazakhstan)
Gumenyuk Valeriya (Kazakhstan)
Bekzod Karimov (Tajikistan)
Sanovbar Karimova (Tajikistan)
Merdan Arashev (Turkmenistan)
Shavkedin Adashpaev (Uzbekistan)
Rustam Akbarov (Uzbekistan)
European expert:
Janerik Lundquist (Sweden)

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ENVIRONMENTAL PROTECTION

1. Introduction

TuCAHEA is aimed at developing a Central Asian Higher Education Area (CAHEA), at the wider use of competence-based tools and tools for improving quality of educational programmes, at modification of regional higher education systems in a positive direction, at the creation of a platform for exchange of knowledge and elaboration of tools for quality improvement in the region as a whole and in each country, with the support of governments and ministries, to ensure the necessary normative change. The goal is to enhance quality and visibility of the region's universities, while ensuring compatibility with the European Higher Education Area (EHEA).

The creation of pilot Tuning Subject Area Groups (SAGs), including the subject area "Environmental Protection", facilitates achieving the goals of TuCAHEA by means of deepening knowledge about availability of tools for quality and transparency; thus creating the foundation for future collaboration; carrying out a wide spectrum of consultations on general, as well as on numerous subject specific competences; preparation and publication of Tuning guides for subject areas; working out programme descriptors using a competence-based approach, while taking into consideration the description of profiles already elaborated in Tuning in other countries. All the above aims at creating foundations for a Central Asian Higher Education Area, a Central Asian qualifications framework, and the implementation of a workload based credit system or credit reference system.

Environmental protection is one of the most burning issues at present. Industrial development is accompanied by large-scale destruction of natural systems and the intensive pollution of the environment, giving rise to enormous harm for nature and society. In today's world global problems associated with the depletion of natural resources and energy, pollution, and lack of food make it imperative for all countries to cooperate to enhance their capacities for prevention of ecological damage, insuring protection and regulation of flora and fauna, and other natural and anthropogenic resources.

One of the major global trends is the realization of the urgent need to protect the environment, natural resources, and to ensure food safety and security.

Most countries are faced with the necessity of solving vital social problems related to human health and the maintenance of the natural environment, the development and adoption of technologies to limit waste and make efficient use of natural and secondary resources, as well as organizing global monitoring areas, to make it possible to monitor and predict environmental change, and manage its consequences. International contacts in the field of environmental protection have become closer, since many of the problems we face – such as the conservation of the ozone layer, the "greenhouse effect", trans-border transport of pollutants, climate change -- require a unified environmental policy, a single legal framework,

a sharing of costs, and compulsory fulfillment of international commitments. In this ambitious, promising and necessary work the main role belongs to experts with deep knowledge and understanding in the fields of environmental protection and food safety and security.

There is increasing demand for professionals specialized in practical environmental activities, the development of new methods and technologies for environmental protection and natural resources management, willing to work in educational and research institutions, large enterprises, as well as in services for disease control and environmental monitoring.

The main objective of the TuCAHEA project is to provide the knowledge, the understanding, and the tools necessary for the transformation of the higher education system from teacher-based system to student-centred. To do this, research was carried out in a collaborative framework by motivated transnational groups of academics, who took into account feedback from students, alumni, employers and other stakeholders.

Another main objective of the project is elaboration of guidelines for the use of competence-based tools for transforming higher education from teacher-based system into learners' needs based systems, which focus on enhancing knowledge and the ability to put it into practice. Research on identifying competences has been carried out jointly by motivated transnational groups of academics who have taken into account the feedback from students, graduates, employers and other relevant stakeholders.

The general preparation of graduates foresees the study of materialism (philosophy), systems analysis, and the doctrine of the biosphere. Learners also study such general scientific subjects as chemistry, ecology, physics, mathematics, and chemical analysis. Programmes include related subjects – biology, soil science, sociology, economics, as well various subdivisions of chemistry: inorganic, organic, analytical, physical, colloid, petrochemicals, polymer chemistry. Chemistry, along with physics and biology, is one of the main scientific disciplines connected to the field. Physics and mathematics should be studied by ecologists in the first year of their training. Aspects of physics and mathematics may be presented together to provide the necessary training, but sometimes the two subjects are studied independently to achieve the required level.

Traditionally, biology as a science largely consisted of description and classification, but modern biology has diverged from this path. Indeed biological education in universities is developing in many novel and important ways. It becomes obvious that any environmentalist should have knowledge of chemistry and biology, and specifically have modern preparation in these areas of science.

Chemical analysis, monitoring and control of the environment are specific aspects of environmental protection.

2. Description of the subject area

All countries in the post-Soviet Union area have inherited economies with obsolete and polluting technologies and equipment for energy and industrial production.

The paradigm of sustainable development is based on a simple and obvious axiom: satisfaction of the needs of the present generation should not be at the expense of future generations' ability to meet their own needs.

Environmental protection, the sustainable use of natural resources, as well as technological safety, and food safety and security, are priorities for scientific and technological progress, and necessary to provide a common and secure foundation for human life. The importance and timeliness of this subject area is determined to a large extent by a desire to find solution to the problem of guaranteeing the health and safety of human beings and preserving the natural environment. In addition, in conditions of rapid development of industries and industrial systems it is necessary to find new approaches to the development and implementation of non-waste technology, efficient use of natural resources and secondary resources, the organization of global monitoring areas, which makes it possible to monitor, predict the ecological environment and manage its development.

As mentioned, the global dimension of the issues and the prevalence of cross-border problems require the development and implementation of a unified environmental policy, a single legal framework, and sharing the costs of compulsory fulfillment of international obligations. General knowledge about and awareness of the laws and correlations between human security, state policy, the environment, and the issue of creating a single integrated system of environmental safety for the Central Asian republics is required. In formulating these Guidelines, the key role has been taken by specialists whose expertise is in the fields of environmental protection, food and industrial safety.

Training specialists in this subject area requires an integrated multidisciplinary approach. Basic training comprises the study of natural sciences (mathematics, physics, chemistry), as well as a number of technical disciplines, giving knowledge of the processes occurring in the biosphere under the influence of various anthropogenic factors, the development of systems to control emissions of toxic substances, and technologies and technical means of environmental protection.

Among the main modules related to this subject area are the following: metrology, standardization, certification, industrial ecology, industrial ventilation, industrial sanitation, production technology, fluid dynamics and heat and mass transfer, food safety.

3. Degrees typically offered at the three cycle levels

In the higher education systems of all Central Asian countries the level or tier model has been introduced:

The Bachelor level comprises a workload of 240 credits in those countries that have adopted ECTS.
First-cycle qualification in the subject area are awarded to students who have shown themselves to have the relevant knowledge and skills, i.e.:

- good grounding in the corresponding area of chemistry: organic, inorganic, physical, biological and analytical chemistry, biology and in addition the necessary mathematical and physical base;
- basic knowledge of the specialized areas which are directly connected with environmental issues;
- practical skills in chemistry acquired during laboratory courses; to lesser extent in inorganic, organic and physical chemistry, biology, physics, where students work individually or in groups as is foreseen in their curriculum.
- general skills in the context of ecology (also applicable in many other contexts).
- standard knowledge and competences which will give to students the chance to continue their studies through second cycle degree programmes.

Such experts will have:

- ability to gather and interpret relevant scientific information and to make conclusions that include a critical approach to scientific and ethical issues
- ability to transfer information, ideas, and illustrate problems and constraints to an informed audience.
- ability to take up employment as an expert at starting level in the main areas of employment, including industries where it is necessary to increase attention to environmental issues.
- well developed abilities of studying and learning which are necessary for further training with a sufficient degree of autonomy.

Master level comprises a total workload estimated as 60, 90 or 120 ECTS or equivalent.
A second cycle degree in the subject area will be awarded to students who possess:

- knowledge and understanding received at the bachelor level
- bases for originality in development and application of ideas within a research context
- ability to take up employment as professional experts in chemical, food and similar industries.
- standard knowledge and competences which will allow them to continue to third cycle courses or degree programmes.

Such graduates will have:

- ability to apply their knowledge, comprehension and ability of problem solving in a new or unfamiliar contexts, within the interdisciplinary context relating to issues of environmental protection.
- ability to unite knowledge and complexity, and to formulate judgments with incomplete or limited information. This ability includes reflection on the ethical obligations connected with application of their knowledge and judgments.

- ability to transfer knowledge and conclusions accurately and clearly, proving them rationally, to experts and non- experts.
- well-developed learning skills which will give them the chance to continue autonomous learning, having accepted responsibility for their professional development.

The aim of the Environmental Protection guidelines is preparation in the bases of humanistic, social, economic, mathematical and natural-science knowledge, as well as more specific higher technical professional education, allowing the graduate to work successfully in the chosen field of activity, possessing the general and specific professional competences necessary to permit social mobility and competiveness in the labour market.

In some countries there is also a third cycle (PhD, doctor's degree), as, for example, in Kazakhstan and Tajikistan. In other countries, for example, in Kyrgyzstan, there is still a system of training of scientific staff according to the 'aspirantura' system, which leads to the award of the academic degrees of candidate or doctor of sciences.

Kazakhstan

The structure of the Kazakh higher education system is represented by three levels of training: bachelor degree programme; master degree programme; doctoral degree programme. As a unit of measure of student workload Kazakh credits and ECTS credits are used. The workload for one Kazakh credit comprises 45 hours of student time; one ECTS credit: 25-30 hours of student time.

First level (Bachelor degree): workload in degree programmes of this cycle comprises 140 Kazakh credits or 240 ECTS credits.
To the graduate who has successfully mastered the study programme in this subject area the academic degree of "Bachelor of life safety and environmental protection" or "Bachelor of technology of processing industries" is awarded.
The student can specialize in the following subject areas: Life safety, Technology of storage and processing of grain, Technology of bread, macaroni and confectionery products, Technology of storage and processing of saccharated raw materials, Technology of fermentation and winemaking, etc.

Second level (Master programme). In Kazakhstan, degree programmes at the master level are subdivided into programmes forming a specific profile ('profile' master programmes of 60 or 90 ECTS) and more general scientific-pedagogical master programmes (120 ECTS). Master students can specialize in such areas as environmental protection, food safety, food engineering.

Third level (Doctoral studies). In Kazakhstan, educational programmes at doctoral level are subdivided into programmes related to specific fields ('profile' doctoral programmes of 60, 90 ECTS) and scientific-pedagogical PhD doctoral studies (120 ECTS). PhD students can specialize in such areas as environmental protection, food safety, food engineering.

Conversion of ECTS credits into Kazakhstan credits is carried out by division of ECTS credits, using a recalculation coefficient. The coefficient depends on the level of study programmes:

1. Bachelor programme: the range is from 1,5 to1,8.
2. 'Profile' Master programme: the range is from 2 to 2.4
3. Scientific-pedagogical Master programme: the range is from 2.5 to 3.
3. PhD programme: the range is between 3.5 and 4.2.

Conversion of Kazakh credits into ECTS credits is done by multiplying by a coefficient of transmission.

Conversion of credits from other types of student work is carried out by analogy with the following coefficients.

- professional practice: between 0,5 and 0,6:
- pedagogical: between 1 and 1,2;
- industrial: between 2,5 and 3;
- undergraduate research: between 4 and 4,8;
- (experimental) research: between 4 and 4,8;

The final grade of students: between 3,2 and 4,5.

Kyrgyzstan

On the **first level (Bachelor level)** educational programmes with a workload of 240 ECTS are implemented. In the context of these programmes, professional training is carried out in the fields/profiles:

- Environmental protection and rational use of natural resources;
- Ecologyand environmental management;
- Ecology;
- Geoecology;
- Environmental management.

On the **second level (Master level)** educational programmes with a workload of 120 ECTS are implemented in the disciplinary area of Ecology and natural resources.

On the **third level (PhD level),** in Kyrgyzstan the system of training of scientific personnel has remained that of awarding a degree of candidate of sciences and doctor of sciences.

Tajikistan

Reform of the higher education system in the Republic of Tajikistan is aimed, in the first place, at quality assurance and inclusion in the global educational area.
In accordance with the Decree № 698 of the Ministry of Education of Tajikistan, credit system implementation has been carried out since September 2014. Within the framework of the new reforms, research on the accumulation and transfer of credits in accordance with US system (USCS), British system (CATS) and European system (ECTS) has been carried out. As a result it has been determined that the ECTS system is the one which best corresponds to the needs of Tajikistan.

The number of credits offered in educational programmes varies and equals to 240 credits for Bachelor's degree, 120 credits for Master's degree and 120 credits for Doctoral (PhD) degree.

On the **first level (Bachelor level)** educational programmes with a workload of 240 ECTS are implemented. In the first cycle (Bachelor level) each credit corresponds to 24 academic hours, including 8 hours of lectures, 8 hours of practical and laboratory classes, and 8 hours of individual work with a teacher;

The **second cycle (Master level)** each credit corresponds to 32 academic hours, including 8 hours of lectures, 8 hours of individual work with a teacher, and 16 hours of individual work without a teacher.

The list of programmes related to the subject area includes the following curricula, according to the Tajik classification:
570101 «Environmental protection and rational use of natural resources»
570102 «Environmental management and auditing the industry»
570103 «Bioecology»
57010101 «Industrial ecologyand rational use of natural resources»
57010102 «Control of environmental and economic systems»
57010103 «Environmental Monitoring»
57010104 «Waste disposal, antisepsis and use of industrial and food product waste»

In the third cycle (PhD) each credit corresponds to 40 academic hours, including 8 hours of lectures, 8 hours of individual work with a teacher, and 24 hours of individual work without a teacher.

All universities have two types of cycles (Bachelors and Masters). The Ministry of Education decided to launch the implementation of a doctoral degree (Candidate of Sciences) in four selected universities in 2014.

Turkmenistan

In May 2013 the new law on education envisaged introduction of two levels of training: Bachelor and Master, as in the Bologna Process. Education in these programmes has not yet started. Currently, the previous system of training subsists: 5 years for specialist, postgraduate and doctoral studies.

The President of Turkmenistan issued the Resolution «About approval of Regulations on state institutions of professional education» (3.20.2014). This document defines the structure and regulates the activities of public institutions of primary, secondary and higher education, and envisages a two-level system of higher education (Bachelor's and Master's degrees).

Among other measures, it was planned to introduce learning foreign languages as a compulsory subject in the curriculum of professional education. Among other things, this provides specifically for conditions of learning in technical-professional schools, and for foreign citizens and stateless persons living in Turkmenistan.

Uzbekistan

The overall structure of the higher education system of Uzbekistan consists of 3 cycles, without the use of ECTS. However, the student workload is based on a fixed number of hours of student time making it compatible with a credit system.

In Uzbekistan, basic laws on education and public documents have been adopted, the latest of which is the joint resolution of the State Committee of Nature of Uzbekistan, and MPE (Ministry of Public Education) of the Republic of Uzbekistan «About the concept of Education for Sustainable Development» dated 19 July 2011. The aim is the formation of critical thinking, spiritually rich, socially active citizens, based on the principles of ecological and moral ethics, inherent to peoples of Uzbekistan. Basic aims are the expansion of the forms of education and access to it; improving the professional competence of the teaching staff and the level of graduates' training; development and implementation of educational programmes based on problem-oriented, interactive teaching methods; promotion of scientific activities related to education for sustainable development and the development of new technologies.

The degree in «Environmental protection and food safety» is described according to the classification of qualifications of Uzbekistan as follows:

First level – Bachelor degree
5310901. Metrology, standardization and quality management of products (by branches)
6630100. Ecology and environmental protection (by branches)
5640100. Life Safety

Second level – Master degree
5A310901. Safety of products and their certification
5A630101. Environmental protection (by branches)
5A630102. Ecology (by branches)
5A630103. Treatment of industrial wastes (recovery)
5A630104. Protection of water resources and wastewater treatment
5A640101. Health, safety of technological processes, manufactures (by branches)
5A640103. Population safety in emergencies
5A640104. Radiation safety of humans and the environment

Third level – Doctoral degree

In higher education, the knowledge of Enviornmental protection is also gained in different ways, in the form of individual small courses in all three cycles. It is also included in other subject areas. In all areas of humanistic studies, classes are provided on the subject of ecology; in natural science and technological curricula, courses on ecology and environmental protection are included. In certain areas, courses on Environmental law or Food safety are included in various curricula which require that knowledge.

4. Typical occupations of graduates at the three cycle levels

Environmental protection and food safety is traditionally defined as the profession linked to the application of mathematical and natural sciences, and technical knowledge, to achieve the goal – through the use of laws of nature and material resources – of creating the necessary materials, structures, technical equipment, machines, systems and processes in order to provide a safer environment. This profession is at the intersection of mathematics, science and social knowledge. The main objective of environmental experts is to develop ideas, design, create and manage innovative solutions, devices, processes and systems in order to improve the quality of life, solving social challenges, improving competitiveness and social welfare.

Graduates of this area can perform the following professional activities:
- Industrial and technological;
- Design;
- Organizational and management;
- Experimental research.

Industrial and technological activities:
- Participation in activities to ensure life safety and environmental protection, the prevention and elimination of natural and man-made disasters;
- Development, implementation and operation of IT systems, networks and equipment, intended to ensure health and safety, environmental protection, protection in emergency situations;
- Implementation of measures on metrology, standardization of controls and measuring, their setting, calibration and adjustment;
- Assessment of technical, environmental and economic efficiency in the implementation of measures to ensure the safety of life and environmental protection;
- Monitoring the exploitation of nature, labor protection equipment and rescue equipment, compliance with the rules, regulations and standards of occupational safety, emergency protection and environmental protection, regulating production processes and equipment, life saving equipment and services, elimination/limitation of consequences of accidents, catastrophes and ecological disasters;
- Conducting primary accounting and operational analysis of current indicators of work performed, measurement of hazardous and harmful factors, adverse effects, and the risk of man-caused accidents and other emergencies in production and technical systems, and monitoring of the environment;
- Assessment of dangerous and harmful production factors;
- Prevention of accidents in enterprises;
- Examination and audit of economic and other activities of enterprises, organizations and citizens; assessment of acceptability of an object of examination in terms of safety for humans and the environment;
- Formation and organization of specialized monitoring, rescue services, labour protection services, their material, organisational and technical bases.

Project activities:

- Participation in the preparation of technical specifications for the development and design of circuits, instruments, devices and systems used in life safety and environmental protection with eco-techno-economic feasibility of the organization, structure and function;
- Development of standard technical, regulatory and environmental documentation related to health and safety and environmental protection;
- Development of technical and working documentation and research projects in social and environmental systems and problems related to environmental protection, environmental management and life safety.

Organizational and managerial activities:

- Setting goals and formulating tasks of current work and for the future;
- Work organization of small groups of collaborators;
- Development of operational plans for primary production units;
- Retrieving and/or producing and organizing technical and environmental documentation related to professional activities;
- Development of rules and regulations in the field of life safety, as well as organizing compliance with them during economic and other activities.

Experimental research activities:

- Measurements and survey of the actual state of the work area, the environment, natural resources, the management of their quality and forecasting for the current and long-term periods and analysis of the results;
- Drawing up descriptions of the research, preparation of data and compilation of reports, reviews and scientific publications;
- Participation in the development and implementation of methods and programmes in the field of health and safety, environmental protection; emergency prevention.

Objects of professional activity of **Bachelors** are companies and organizations that have an impact on natural components; technological, social, information systems and their components; water, land, biotic and other resources; factors that determine the safety of life and protection of the environment; engagement in the development, implementation and operation of technological systems, networks and protection in emergency situations; prevention of fire, environmental, chemical, radiation and other hazards; design and research institutions, bureaux, firms, etc. having various forms of ownership.

The Bachelor can occupy engineering positions:

- in enterprises of mechanical engineering, energy, transport industry, construction industry, chemical and petrochemical industry, food industry;
- in private business organizations;
- in bodies of state control and management of emergency situations and civil security.

The **Masters'** area of professional activity includes the development of scientific bases, creation and implementation of energy and resource-saving, environmentally safe technologies; development of methods for the treatment of

industrial and domestic waste and secondary raw materials; minimization of anthropogenic impact on the environment; human security in the modern world; preservation of human life and health through the use of modern technical means of control and forecasting.

The Master can occupy engineering and scientific-pedagogical positions:
- in enterprises of mechanical engineering, energy, transport industry, construction industry, chemical and petrochemical industry, food industry;
- in private business organizations;
- in bodies of state control and management of emergency situations and civil security;
- in scientific and educational institutions.

The professional activity of **Doctors of Philosophy** includes the development, design, adjustment, operation and improvement of environmental protection equipment and technology; organization of environmental work and managing the work of enterprises and the territorial-industrial complex; examination of projects, technologies and manufactures; product certification to achieve maximum environmental safety of human economic activity, reducing the risk of human impact on the environment; analysis and identification of hazards, the protection of human, nature, economic facilities and the technological sphere of natural and man-caused hazards, the reduction or elimination of the consequences of hazards; control and forecasting of anthropogenic impact on the environment; development of new technologies and methods of human protection, economic facilities and the environment; eco technological and sustainable development; managing impact on the environment.

The Doctor of Philosophy can occupy engineering positions and scientific-pedagogical positions, and direct the relevant units:
- in research and engineering institutions;
- in enterprises in industry, transport and construction;
- in non-governmental economic organizations and private business;
- in bodies of control and management of environmental protection and labour safety.

5. The most relevant competences for the Subject Area

The first step in the Tuning methodology is to develop awareness of the importance of "shared or transversal competences" in the educational process. Traditionally, universities have been focused on the transfer of knowledge specific to the field of study and formation of the generic or general competences was largely unplanned. In order to raise awareness about the importance of general competences (GC), experts from each of the Central Asian countries have developed a list of important general competences and held consultations on their relative importance and the degree at which they are being developed by universities. The consultations were organized to involve employers, students, graduates and academics.

5.1. General competences

In accordance with Tuning methodology the members of each national group of delegates from Central Asia countries reviewed and discussed a list of general competences which were developed in other countries (Europe, Latin America, Africa and Russia). They proposed new competences and modified or eliminated those chosen in other countries. The five resulting lists were merged into one agreed list. During the discussion and selection of the most important competences, the working group members based their considerations on the current situation of higher education development in the country, the role of higher education institutions in society and the possibility of higher educational institutions for the development of the ethical, spiritual and moral values among students.

The agreed list of general competences with code indicators:

GC01 Ability to analyze and synthesize
GC02 Ability to use logical and critical thinking for solving problems
GC03 Ability to model, design and forecast
GC04 Ability to carry out research applying appropriate methods
GC05 Ability to take initiatives and entrepreneurship
GC06 Ability to innovate
GC07 Ability to develop general knowledge
GC08 Ability to learn including autonomous learning
GC09 Ability to communicate interactively and receive feedback
GC10 Knowledge of the professional field
GC11 Ability to communicate in multicultural context
GC12 Ability to communicate in official state, Russian and foreign languages
GC13 Ability to lead people and work in a team
GC14 Ability to manage information
GC15 Ability to use information and communication technologies
GC16 Social responsibility
GC17 Ability to follow a healthy lifestyle
GC18 Ecological and environmental responsibility
GC19 Knowledge of the laws
GC20 Ability to prevent and resolve conflicts
GC21 Patriotism and preservation of own cultural values
GC22 Tolerance and respect for others
GC23 Commitment to quality results
GC24 Flexibility
GC25 Ability to apply knowledge in practice
GC26 Orientation toward the needs of the user
GC27 Ability to work autonomously
GC28 Ability to adapt to change
GC29 Ability to make decisions
GC30 Time-management

Consultations about the general and subject competences of area were carried out in two stages. The first stage included an inquiry or consultation among students and teachers, other graduates, and employers. During this consultation,

respondents were asked to rate 30 general competences and 16 subject specific competences for the subject area of "Environmental protection and food safety" on a scale of 1-4 (1 - not important, 2 - less important 3 - important, 4 - very important) with respect to their importance and to the degree of achievement during studies.

As regards the Environmental Subject Area:

- 1211 respondents participated in the inquiry to determine the relative importance and degree of achievement of the general competences. These were 472 students, 332 teachers, 242 graduates, 163 employers.
- 1087 respondents participated in the inquiry to determine the relative importance and degree of achievement of the subject specific competences. These were 451 students, 322 teachers, 191 graduates, and 123 employers.

On the basis of the results of the consultation with the interested parties (employers, graduates, students, scholars) and the discussion within the subject area group (SAG) the following 8 general competences were identified as the most important for Environmental Protection.

Table 1- Key General Competences for Environmental Protection in Central Asia

GC01 Ability to analyze and synthesize
GC02 Ability to model, design and forecast
GC03 Ability to carry out research applying appropriate methods
GC08 Ability to learn including autonomous learning
GC10 Knowledge of the professional field
GC12 Ability to communicate in official state, Russian and foreign languages
GC13 Ability to lead people and work in a team
GC18 Ecological and environmental responsibility

5.2. Subject specific competences

The Subject Area Group also elaborated a generalized model of professional competences in the field of environmental protection and food safety. This resulted in a list of 26 competences which was also proposed to the stakeholders in the above described consultation:

1. Knowledge of the international, regional and national legal provisions for ecology, environmental protection and biosafety.
2. Knowledge of the basic principles and laws of how ecosystems function.
3. Knowledge of the main principles of general ecology and rational environmental management.
4. Knowledgeof the basic elements of social ecology and demography.
5. Knowledge of the basic techniques of environmental and food quality monitoring.

6. Knowledge of the basic techniques and methods of engineering protection of environment, and ability to process statistical data.
7. Knowledge of the location of natural resources and of the basic manufacturing and non-manufacturing assets of the state.
8. Knowledge of safety technologies and the latest nanotechnologiesof food production and storage.
9. Knowledge of the basics of environmental-economic regulation and payment systems for natural resources [and environmental pollution].
10. Knowledge of the global environmental and food safety challenges.
11. Knowledge of the basic principles of waste placement, treatment and disposal, including the means and methods of monitoring and control of environmental impact.
12. Knowledge of the legal acts [documents] regulating the protection of human, animal and plant life.
13. Ability to apply basic tools of rational environmental management; using statistical analysis in the field of ecology.
14. Ability to process and analyze data using information and communication technologies.
15. Ability to draw up normative and legal documents on environmental issues.
16. Ability to apply regulations and laws for environmental management.
17. Ability to elaborate and apply modern methods and means to protect the environment.
18. Ability to solve engineering problems and problematic situations in the field of environmental protection.
19. Ability to apply methods of investigation and analysis of the chemical, biological, radiological properties and safety of natural resources.
20. Ability to analyze climatic conditions and develop appropriate and effective measures to deal with them.
21. Be able to use innovative methods of research in the environmental evaluation of natural and anthropogenic ecosystems.
22. Ability to analyze the properties and environmental impact of hazardous chemical, biological or radioactive substances.
23. Ability to make prognoses and work out recommendations for the prevention and/or liquidation of anthropogenic emergencies.
24. Ability to work out recommendations for themanagement and conservation of natural resources.
25. Ability to analyze and identify environmental problems, suggest solutions and predict the results.
26. Ability to conduct independent research, environmental and economic examination of environmental projects, and apply knowledge in scientific and educational activities.

On the basis of the responses from the stakeholders (employers, graduates, students, teachers) and further evaluation and discussion by the Subject Area Group, certain competences combined, and the following 10 are indicated as the most important for environmental protection and food security:

Table 2 - Key Subject Specific Competences in Environmental Protection in Central Asia

Code	Key Subject Specific competences
1	Knowledge of the international, regional and national legal provisions for ecology, environmental protection and biosafety (SC01)
2	Knowledge of the basic principles and laws of how ecosystems function (SC02)
3	Knowledge of the main principles of general ecology and rational environmental management (SC03)
4	Knowledgeof the basic elements of social ecology and demography (SC04)
5	Knowledge of the basic techniques of environmental and food quality monitoring (SC05)
6	Knowledge of the location of natural resources and of the basic manufacturing and non-manufacturing assets of the state.(SC07)
7	Knowledge of safety technologies and the latest nanotechnologiesof food production and storage (SC08)
8	Knowledge of the global environmental and food safety challenges (SC10)
9	Ability to apply methods of investigation and analysis of the chemical, biological, radiological properties and safety of natural resources (SC19)
10	Ability to make prognoses and work out recommendations for the prevention and/or liquidation of anthropogenic [or natural] emergencies (SC23)

Table 3 - Useful interpretation of the key subject specific competences for Environmental Protection in Central Asia

Code	Competences	Interpretation
Key SC1	Know the international, regional and national legal provisions for ecology, environmental protection and biosafety	Ability to apply practical knowledge in the sphere of international, regional and national legal provisions for ecology, environmental protection and biosafety Ability to identify, formulate and solve problems in the field of environmental protection and food safety Ability to analyze and use different sources of information for the development of actions for ecology, environmental protection and biosafety. Ability to identify internal strengths and weaknesses of the legal and regulatory provisions Ability to manage resources in accordance with the planned objectives and activities
Key SC2	Know the basic principles and laws of the functioning of ecosystems.	Apply in practice the basic principles and laws of ecosystems functioning. Examine the impact of climate change on the basic principles and laws of ecosystems functioning. Knowledge and understanding of the subject area and profession

Key SC3	Know the basic provisions of the general principles of ecology and environmental management.	Ability to assess the impact of the latest achievements of science and advanced domestic and foreign experience in the basic provisions of general ecology and environmental management principles Ability to create own analytical models using knowledge of the main provisions of general ecology and environmental management principles Ability to identify opportunities for mutual cooperation
Key SC4	Know the basic elements of social ecology and demography.	Ability to collect and use the necessary data and use them effectively in solving problems of social ecology and demography Ability to predict the directions of social ecology and demography
Key SC5	Know the basic rules and methods of environmental monitoring and food quality.	Analyze the results of research in the field of environmental monitoring and food quality and develop new effective methods. Ability to conduct research effectively applying the basic rules and methods of environmental monitoring and food quality
Key SC6	Know the system of placement of natural resources and the basic production, non-production assets of the state.	Ability to effectively put into practice the knowledge in the field of placement of natural resources and the basic production, non-production assets of the state Ability to analyze the results of research and create own design solution in the placement of natural resources and the basic production, non-production assets of the state Ability to use the basic theories of motivation, leadership and management capabilities (managerial skills) Ability to effectively organize a group work on the basis of knowledge of team building principles
Key SC7	Know the safety technology and the latest production technology and food storage.	Ability to effectively apply knowledge to solve problems of safety technology and the latest production technology and food storage Ability to develop new and innovative safe technologies of food production and storage
Key SC8	Know the global problems in the field of environmental protection and food safety.	Ability to explore and analyze the global problems in the field of environmental protection and food safety The ability to make, develop, and promote recommendations to solve global problems in the field of environmental protection and food safety, research and analyze global problems in the field of

		environmental protection and food safety
Key SC9	Know the methods of investigation and analysis of the chemical, biological, radiation properties and safety of natural resources.	Ability to apply practical methods of investigation and analysis of the chemical, biological, radiation properties and safety of natural resources Ability to develop and improve existing methods of investigation and analysis of chemical, biological, radiation properties and safety of natural resources
Key SC10	Ability to make prognoses and work out recommendations for the prevention and/or liquidation of anthropogenic [or natural] emergencies	Ability to research for predicting and developing of recommendations for the prevention and elimination of consequences of natural and man-caused disasters Ability to predict and to develop recommendations for the prevention and elimination of consequences of natural and man-caused disasters

5.3. Meta-profile

A meta-profile reflects the structure and interconnection of competences, which characterizes a given subject area. Meta-profiles are used for reference; they depict mental models and should demonstrate the variety of possible and existing profiles of the degree in the concrete subject area.

Meta-profiles are determined on the basis of the analysis of results of consultations with the interested parties by means of establishing the categorization of the list of competences. Such a classification can be represented in different ways in various subject areas and should reflect unique characteristics of the subject area. What follows constitutes an approach to such a classification for our Subject Area.

6. Cycle level descriptors (with reference to Qualifications Frameworks) in terms of competences

A set of learning outcomes for each cycle has been formulated in terms of competences. The learning outcomes should be defined at the level of the degree programme, as well as at that of the individual course units or modules. The learning outcomes of individual units / modules must be coordinated so as to contribute effectively to the overall learning results of the programme.

Below are general learning results in terms of competences for each level within our subject area.

6.1. First Cycle (Bachelor's) degree

First cycle graduates: the main objectives of educational programmes:

The Bachelor's degree in the field of environmental protection and food safety is awarded to a graduate in possession of multicultural and communications skills, capable of making decisions creatively and professionally on a modern scientific and practical level, of addressing socially significant problem in health and safety, in environmental protection and disaster prevention for businesses, organizations and industries, including those comprised in the 'military-industrial' complex, agriculture and communal services. The sphere of action includes environmental protection and food safety in production and consumption; the graduate assists or collaborates with public authorities in the field of health and safety, and those responsible for environmental protection, emergency protection, environmental services. The training programme is completed with the preparation of a graduation project or piece of work that can demonstrate the ability to integrate theory and practice, as well as to solve problems of various kinds.

A Bachelor in the field of environmental protection and food safety must be able to work independently, demonstrate knowledge, understanding and skills at the level of departments and organizations, to be able to analyze industrial and environmental situations with regard to their security and safety, to make decisions and prevent of adverse situations, ensuring the organization necessary to protect lives and the environment.

The graduate in general will show that he or she has developed an appropriate level of:

- Knowledge and understanding;
- Ecological, physical, ethical, legal culture; culture of thinking; language training;
- Human, social and personal values;
- Interaction with the environment;
- Leadership skills and behavior;
- Ability to choose creatively and professionally advanced goals in life safety and environmental protection;
- Formation of theoretical and practical knowledge, and the skills required to implement them in professional activities;
- Ability to identify and evaluate critically different points of view in the field of environmental protection;
- Ability to interpret critically, evaluate, and apply knowledge in their own lives;
- Ability to use and adapt their knowledge and skills in the field of environmental protection and food security;
- Ability to find and interpret information in order to solve problems with the help of analysis and evaluation.

Table 4 - Bachelor Level Environmental Protection in Central Asia

Knowledge	Skills	Level of autonomy and responsibility
Know the main branches of mathematics, physics, chemistry, engineering drawing; have the basic knowledge required for the study of professional disciplines. Be able to demonstrate knowledge and understanding in the professional field. Know the classification and characteristics of modern equipment to ensure safe working conditions. Possess methods of technical and economic analysis, is able to inform decision-making and implemented in the field of occupational and environmental safety; is able to apply the results in practice. Be skilled in the management of natural resources, energy and materials in production and economic activity of enterprises. Have knowledge of the organizational structure, management practices and regulatory criteria of efficiency in health and safety and environmental protection. Be able to identify danger zones and harmful hazards in various	Ability to communicate information, ideas, problems and solutions in the field of health and safety and environmental protection. Ability of logical and critical thinking. Ability to rethink experience critically, if necessary, change the profile of their professional activities, be aware of the social importance of their future profession, have a high motivation to carry out professional activities. Be able to perform work on the certification of jobs and environmental impact assessment and develop documentation and training materials, proposals and measures to improve working conditions and reduction of anthropogenic impacts on the environment. Possess the skills of finding a compromise between the different requirements in the field of occupational safety and environmental safety requirements, and the cost and quality of work and is able to make better decisions in the field of occupational health and the environment. Be able to synthesize, analyze, process information, goal setting and selection of ways to achieve it; may formulate arguments and solve problems in the field of occupational safety and	Be prepared for the development of technical standards in the field of health and safety and environmental protection, working at the command level. Be able to adapt to change. Be able to manage time. Be committed to quality results on a personal level. Be able to take personal social responsibility. Be willing to take responsibility for managing professional development of individuals and groups. Be able to manage technical or professional activities in the field of environmental protection. Be ready for the development of

enterprises. Be able to analyze the best scientific expertise and technical solutions in the field of occupational health and environmental safety. Be able to perform theoretical and experimental studies on the feasibility of innovative technologies in the field of health and safety and environmental protection. Be able to use the data evaluation of the technical condition of the equipment ensure safe working conditions and reduce the impact on the environment. Be able to use advanced waste technologies aimed at sustainable development. Be capable of self-improvement and professional growth of the individual with diverse humanitarian and scientific knowledge and interests.	environmental safety; It is able to collect and interpret information to form judgments taking into account social, ethical and scientific considerations. Possess a basic knowledge of physiology and hygiene, ability to competently operate in accidents and emergencies. Have knowledge of technical terms and rules of rational operation of the equipment ensure safe working conditions and reduce the impact on the environment. Possess the ability to produce a measuring experiment and evaluate the results of measurements. Possess the ability to research and analyze the necessary information, technical data, performance and results of the work on improving processes of operation, equipment maintenance ensures safe and high working conditions. Possess the ability to research and analyze the necessary information, technical data, performance and results of the work on improving environmental safety for a company as a whole.	the technical features of the service and process equipment for cleaning up emissions and waste water, as well as providing sanitary and safe working conditions. Be able to participate with a group of colleagues in the performance of research and experimental work in the field of occupational health and environmental safety.

6.2. Second cycle (Master's) degree

The Master must have fundamental scientific and vocational training; must own modern information technologies, including methods of producing, processing and storing scientific information in order to be able to identify and solve modern scientific and practical problems, to plan and carry out scientific research and experimental research in their chosen profession, teaching in higher educational institutions, successfully conduct research and management.

Completion of second cycle programmes usually requires the preparation of a diploma or master's thesis or projects to demonstrate and document graduates' ability to integrate theory and practice, and to solve problems in their field, ensuring the substantive protection of the environment and food safety.

In addition to the second cycle programmes which continue the educational programmes of the first level, there are two other forms of training in environmental protection and food safety at the second level.

A Master's degree for quality scientific teaching education requires:
- professional competence;
- in-depth theoretical and practical individual training in accordance with the needs of society, the economy and the labor market in the field of health and safety, environmental protection, emergency protection, environmental services;
- a holistic picture of the world.

The scientific-pedagogical curriculum includes:
- Methods for determining environmental safety of natural and man-made disasters assessment and prediction of emergency situations;
- Analysis and systematization of scientific and technical information for the selection of methods and means of solving problems in the field of health and safety in emergency situations;
- Prospects of technical development and the features of the organization and management of health and safety;
- Methods for assessing the reliability and safety of technical systems.

'Profile' Masters awards or preparation for specific sub-fields emphasise:
- Ability to utilise measuring and testing equipment for quality control and security industries; applying modern methods of control and protection, according to the rules for their application;
- Ability to use computer technologies for work and documentation security;
- Ability to act autonomously in emergency situations;
- Research skills in the field of health and safety and environmental protection;
- Organizational and technological skills, and experimental and research activities in the field of health and safety and environmental protection;
- Possession of good communication skills, based on principles of patriotism, citizenship and tolerance;
- Ability to analyse and systematize scientific technical information for choosing methods and means of solutions in the area of life safety during emergency situations.

Table 5 - Master Level in Environmental Protection in Central Asia

Knowledge	Skills	Level of independence and responsibility
Know the laws and nature of the occurrence of emergency situations of both natural and technogenic character; Know about and understand the negative impact of humans on the environment and its consequences; Know the relevant methods of assessing the reliability and safety of technical systems; Be aware of future prospects for technological development and how to update organization and management in the area of life safety.	Be able to apply methods of determining ecological safety during natural and man-made disasters, and to carry out assessment of emergency situations, predicting outcomes; Be able to analyse and systematize scientific technical information for choosing methods and means of solutions in the area of life safety during emergency situations; Possess the skills necessary to carry out research work in the areas of life safety and environmental protection; Possess the organizational and technological skills, calculation and design skills, experimental and research skills in the areas of life safety and environmental protection.	Have the ability to apply checking, measuring and testing equipment for the quality assurance of the output and ensuring safety of production processes; Be be able to use modern methods of monitoring safety and means of ensuring safety, rules for their application; Be able to use computer technology in field and office works for ensuring safety; Be able to orientate co-workers and the civil population in emergency situations in a stress-free manner; Be able to approach environmental and ecological situations, including emergencies, with a positive attitude and ability to communicate confidence to others.

6.3. Graduates of the third cycle (PhD):

Graduates of educational PhD programmes in Health and Safety and Environmental Protection acquire general and subject specific (professional) competences necessary to become a teacher in higher education. These include:

- Skills of handling modern technology, to be able to use information technologies in professional activity;
- The ability to master the skills of acquiring new knowledge necessary for daily professional activities;
- General scientific (basic knowledge of: health and safety and labor protection, environment and natural sciences, economic sciences, and others);
- Basic knowledge in the fields of natural sciences (social, humanitarian, economic), as part of the formation of a highly educated person with a broad outlook and culture of thinking;

- Ability to learn and acquire new knowledge and skills in mathematics, natural sciences and social and economic sciences;
- Possession of the necessary tools: computer skills, written and oral communication in the native language, knowledge of a foreign language, etc.;
- Ability to ultilize informatics and computerization for scientific research;
- Knowledge of the types of software products useful for solving problems in the field of health and safety;
- Ability to use information technology, software in the industry;
- Ability to communicate in one's native language (written and oral) in different situations;
- Ability to use correctly and with appropriate vocabulary the national, English and other languages;
- Social, personal and general culture;
- Knowledge of social and ethical values based on public opinion, traditions, customs, social norms and ability to be guided by them in professional activities;
- Ability to observe ethical and legal standards of conduct;
- Ability to be tolerant with respect to the traditions and culture of other peoples of the world;
- Ability to know the trend of social development;
- Ability to know how to act properly in different social situations;
- Ability to find compromises, relating their opinion to the opinion of the team;
- Ability to strive for professional and personal growth.

Subject-specific (professional) competences:

- Knowledge of the principles of standardization, certification and technical measurements in the field of health and safety and environmental protection;
- Knowledge of methods of evaluating the technical feasibility and environmental and economic benefits of activities undertaken to ensure the safety of life and protection of the environment;
- Basic knowledge of occupational safety, industrial ecology and life safety, as well as radiation, chemical, biological, fire safety;
- Basic knowledge of language and the basics of programming, standard software products focused on solving problems in the field of health and safety;
- Ability to carry out professionally industrial and social activities; set goals and formulate problems with respect to current and future situations; liaise with colleagues and plan the work of small groups;
- Ability to realize one's potential to improve the level of education, scientific outlook, competence, qualification, acquisition of new knowledge and skills, improving knowledge of the national, Russian and foreign languages;
- Ability to use tools of computer science and computer technology to search, collect, store, process and use information;
- Being prepared to expand the scope of, or change in the nature of one's professional activities;
- Possession of positive communication skills, based on the principles of patriotism, citizenship and tolerance.

Table 6 - Doctoral Level: Environmental Protection in Central Asia

Knowledge	Skills	Level of independence and responsibility
Know international legal provisions and those of one's country in the area of life safety, safety in emergency situations, environmental protection and environmental management; Have systematic understanding of the specific field of study; Know the principles of standardization, certification and technical measurements in the areas of life safety and environmental protection; Know the methods for assessing technical-economic and environmental-economic efficiency of measures taken for ensuring life safety and environmental protection; Know the basics of occupational safety, industrial ecology and life safety, as well as radiation, chemical, biological and fire safety.	Be able to effect critical analysis, evaluating and comparing different scientific theories and ideas; Be able to implement analytical and experimental research activities; Be able to planning and forecast research results; Be able to speak publically with eloquence in international scientific forums, conferences and seminars; Be able to conduct scientific writing and scientific communication; Be able to plan, coordinate and carry out research processes; Be able to demonstrate the quality and effectiveness of the chosen research methods; Have a responsible and creative approach to research and teaching activities; Be able to use computer science and technology at a high level for data search and collection, data storage and processing and its use.	Be able to use lateral thinking to generate new knowledge in the areas of environmental protection; Be able to perform industrial and social activities in a professional manner; Be able to set goals and formulate tasks for the current work and the future; Be able to cooperate with colleagues and plan the work of reseach or operational teams; Be able to realize one's potential in enhancing one's own education level, increasing scientific erudition, competences, and qualification; Be ready and able to gain new knowledge and acquire new skills; Be ready to expand or modify one's professional horizons or professional field.

7. Approaches to learning, teaching and assessment

The aim of teaching, learning and assessment is to ensure that the students, by the end of the study period, have formed the necessary and relevant competences, and know how to apply and develop their learning. The student should be at the centre of the process and the teacher should have the role of creating a learning environment, by which we mean an environment in which learning can take place in an optimal way. Normally this means that there should be a variety of approaches, both because different students react different to different metholodgies, and because the competences themselves require different approaches.

Ideally the overall plan for the degree programme should be developed by the teachers after consultation with the stakeholders, including employers and students, and graduates, and should be organized so as to ensure that all the key competences are developed to an adequate level.

Even traditional methods, such as lectures, may be included in the panoply of approaches considered. However lectures themselves can become more useful when combined active educational methods. For example, if students are given articles and materials to prepare beforehand, the lecture itself and the discussion that follows will become an occasion for active and hence more meaningful learning. Often it is useful to adopt methods that are current practice in other disciplines, as well as those common in one's own field.

Furthermore, according to the subject matter and the level of the students, it is useful to organize classes and activities in various ways. For example, students can be given group work, so that they learn to work in groups, taking different roles within the group. Thus they will learn teamwork and also leadership skills. Lectures to groups of students will be most useful when the students are prepared to pose questions to the lecturer and to discuss the information provided. Hands-on experience, through traineeships, practicals, visits to places where disciplinary knowledge such as they have acquired is actually used will help them in their future careers.

Various methodologies have now been identified and their use consolidated. In our subject area group work and individual projects are both useful, as are excursions and site visits; problem-based and task-based learning are particularly fruitful in learning to apply knowledge in concrete, real-life situations. Training in research methods and doing actual research at an appropriate level is also of importance in the formation of the necessary competences. From laboratory exercises to in-the-field observations, students will benefit by actually performing the activities which will be necessary in their professional career.

Internet and ICT offer many ways to enhance the students' experience.

It is also necessary to take into account the level of knowledge and understanding about ecology and environmental issues that the students possess when they begin their higher education. Since such issues regard all citizens and dealing with

them successfully requires the efforts and understanding of everyone, we consider it very important that there be compulsory teaching of ecology in schools and colleges. For school-age pupils to have environmental training would improve the theoretical level of the national mentality and the level of training of teachers. If training is carried out in schools on such issues as environmental protection, food security, resource constraints, cost, competition, and the like, when individuals become university students, it will be easier for them to carry out independent work, and teachers will be able to add to their traditional methods such methods as "teamwork", "project work", "simulations", "cases" and so on in approaching complex ecological and environmental issues at the university.

Regarding the score or grading system, there is no unified system in Central Asia. We think it would be helpful to adopt a single overall system. The problem itself is relevant, as the environment and food security is important in the development of countries, and for the preservation of public health. Therefore, more in general, an agreed system which coordinates studies in Environmental Protection and makes them comparable would be useful for Central Asia.

Table 7 - Approaches to Learning, Teaching, and Assessment
Key General Competences for Environmental Protection

GC1. Ability to analyze and synthesize	
What does this competence mean?	The graduate should be able to carry out the basic operations of analysis, synthesis, and prediction or forecasting. Analysis means using logical methods and research methods which consist of dividing the object studied into constituent elements (attributes, properties, and relationships), each of which is investigated separately as part of a whole. Synthesis is the logical process by which the individual elements are connected to form a whole. As a skill, it is the knowledge and ability to apply professional techniques for the analysis and synthesis of the studied object and to reach a satisfactory solution for a task.
How is it learned today?	Today it is accomplished by examining the main international, regional and national legal provisions regarding the environment, environmental protection and bio-security, carrying out analysis and synthesis with respect to their content, with the aim of developing skills to foster theoretical and practical knowledge in this field.
How could it be learned?	Developing the competence is possible by the development of the student's intellectual abilities, i.e. the ability to implement the various techniques of mental activities: to carry out analysis and synthesis, comparison, classification and systematization of concepts and facts, as well as to establish causal links and determine the general, the peculiar, the sporadic, and so on.
How is it taught today?	Students are taught not to trust the work of others, but, on their own, to find errors, to analyze the causes of incorrect solutions

	of problems and to eliminate the knowledge gaps identified.
How could it be taught?	The training/teaching system should be based on a problem-oriented approach, which includes the independent student activity at all stages of preparation.
How can it be assessed?	By evaluating the result in accordance with the criteria set, with some advice and necessary data provided by the instructor and agreeing with the student on how to overcome the difficulties encountered in solving the problems.
With what criteria?	Oral questions, written exams, simple and complex testing, written and oral presentations, group work, participation in discussions, the topics included in the portfolio, etc.
GC2. Ability to use logical and critical thinking for solving problems.	
What does this competence mean?	The use of elements of critical thinking techniques creates conditions for creative self-realization and development of cognitive skills.
How is it learned today?	Students are asked to employ critical thinking in the process of studying, generalization and consolidation of educational material.
How could it be learned?	Critical thinking does not automatically appear as a by-product of normal training in whatever area. To achieve the desired effect, it is required to make systematic efforts to improve thinking capabilities and awareness of thinking processes. Each new fact is subjected to critical reflection, and the process of learning takes place individually and thus becomes productive.
How is it taught today?	Critical thinking promotes mutual respect between partners and understanding and productive interaction between people, facilitates the understanding of different 'world views', allows students to use their knowledge meaningfully in situations with high level of uncertainty. Therefore, this kind of thinking is now very much in demand. Currently students often react negatively to the necessity of critical thinking in the process of learning**.**
How could it be taught?	It is necessary to form student's ability to think creatively and critically. The teacher's ability to do so defines his/her professional level. The productivity of the students' own activities and, consequently, the effectiveness of the entire learning process depend on how successfully the teacher is be able to form students' ability to think critically and ensure perception, memorizing, understanding, comprehension and other thinking processes. Thus, critical thinking is a necessary component of the professional competence of a teacher, who, in his/her turn, forms students' ability to think critically.
How can it be assessed?	Oral questions, written exam, testing, complex testing, written presentation, presentation of homework, discussions, workshops, round tables, group work, case studies and others.
With what criteria?	Assessment is carried out on the basis of critical thinking, we are able to get an idea about the development of reflection and its premises - skills and knowledge - on which it is formed.

GC3. Ability to model, design, and forecast	
What does this competence mean?	Ability and skills to forecast, design and model, as well as to develop knowledge.
How is it learned today?	During the process of learning, the methodological basis and forms of carrying out research, which aim to forecast the dynamics of various phenomena and processes, are highlighted; the method of Situation Modeling is learnt; design methods are analysed.
How could it be learned?	Mastering the methodology of forecasting and techniques of project elaboration and realization will enable students to improve significantly the quality of research, conducted in the framework of their term papers and diploma theses, as well as to strengthen their practical applied focus on the real needs of their professional activities.
How is it taught today?	Nowadays in Kyrgyzstan this is included in the preparation of bachelors during the 3rd year of study. The following year they will complete their training with their diploma work. The Bachelor's degree in Tajikistan is a four-year programme; during those years students must master the methodology of forecasting, designing and modeling for solving their future professional tasks.
How could it be taught?	Teaching should cover the basic questions of methodology, theory and history of scientific forecasting, designing and modeling of processes; domestic and international experience in this field; various kinds and types of forecasts, projects and models. Particular attention should be paid to the formation of skills to implement the theoretical and methodological principles of forecasting, designing and modeling in practice.
How can it be assessed?	Assessment of the following is carried out: tasks in the classroom, independent student work, final exam. Presentations, written summaries of scientific papers, reports on creative and research works, essays, articles and graduation thesis are taken into account.
With what criteria?	Acquired knowledge in forecasting,designing, and modeling.
GC4. Ability to carry out research using appropriate methods	
What does this competence mean?	Research work is a compulsory part of training for Master's degrees. Such training aims to complete the formation of common cultural and professional competence in accordance with the requirements of state educational standards of higher professional education.
How is it learned today?	Research work carried out in the classroom, laboratory and field conditions requires constant painstaking mental work of students, forming such important qualities as perseverance, ability to overcome obstacles, abilities of self-development, the inner desire for the new and more complete knowledge, and the

	analysis and development of their own capabilities.
How could it be learned?	Research work by students prepares the future experts for the passage from the world of university knowledge and skills to the professional research realm, helping to learn the basic methodology of scientific activity and to gain research experience.
How is it taught today?	At present there is not enough actual experience in the use of methods of scientific research, awareness of the laws of logical thinking, regulations, new tools and technologies.
How could it be taught?	In order to ensure that the graduate will be able to conduct scientific research independently in his chosen field, his/her scientific work should be taught to show independence of thought, a fairly complete knowledge of the techniques, the ability to work with the material in the experimental and theoretical level, as well as knowledge of the requirements for the presentation of scientific work on the subject. Students must learn to analyze their own experimental data and data based on the scientific literature, and to draw clear conclusions.
How can it be assessed?	Preliminary checks, continuous checking, final exam. Presentation and defense of term paper and diploma thesis. State examinations on main subjects. Reports, presentations and written summaries of scientific papers, research papers and analytical reports, reports on the creative and research work, essays, articles, etc.
With what criteria?	Research work can be assessed using the methods of scientific research, measuring acquired skills in analysis, synthesis and forecasting and ability to implement informed decisions to complete tasks.
GC8. Ability to learn including autonomous learning	
What does this competence mean?	This competence is the quality of the individual, which characterizes his/her ability to carry out systematic self-organized learning activities, aimed at the enhancement and expansion of their education, with respect to general culture, professional knowledge and capabilities, and suitability for the opportunities offered by the labor market.
How is it learned today?	At present there is a shortage of this competence, and the quality of self-reliance, which is characterized not only by the ability of the person to acquire knowledge and skills without assistance, but also by the presence of the internal human desire for self-realization through self-education.
How could it be learned?	This competence is based on the ability to gain experience and follow independent paths toward self-educational activity, developing their own individual systems for learning, carrying out the transition from copying others to developing their own models, and including the development of the self-image in student life.
How is it taught	The most important condition for improving the effectiveness of

today?	the training is psychological, theoretical and practical preparedness of students for independent work. But, unfortunately, often the level of pre-university training of students in this regard, whatever the form of education, is very low. Consequently, the initial objective of university teachers is to activate methods of independent work in order to form an academic culture of work to enable future graduates not only to adapt to training conditions at university, but also to create conditions of constant professional growth for employment and self-development for life in general
How could it be taught?	The only way that this competence can be fully developed is if the student has learned to be able to identify the problem, to find a way to solve it on his/her own or with the help of knowledge which he/she can identify and achieve. This level of attainment is reached at the final stage of the formation of self-reliance in learning.
How can it be assessed?	The assessment of knowledge should be carried out by the rating system for the control of knowledge.Written and oral forms of checks and tests; evaluation of the performance of independent tasks.
With what criteria?	Evaluation criteria: - Skills and experience of self-educational activity of the student as evidenced by the student's performance of independent tasks - The student's desire to expand their educational potential - The ability to improve individual abilities and skills - Ability of systematic self-organized learning activities, aimed at the continuation of education in both its general cultural and professional aspects. - Aspiration to improve their competitiveness in the labor market.
GC10. Knowledge of the professional field.	
What does this competence mean?	One of the most important components of professional competence is the ability to acquire new knowledge and skills independently, and use them in professional activities.
How is it learned today?	Studies of professional interests of students show that 70% of their dominant professional interests lie outside the chosen field of study. It is obvious that this will affect not only the level of their professional training, but later also the effectiveness of their professional activity.
How could it be learned?	A graduate must have mastery of the knowledge and skills that characterize the chosen profession and qualify the graduate to practice it and to meet qualification requirements.
How is it taught today?	Traditional teaching techniques include lectures, workshops, laboratory sessions; these need to be improved, based on the introduction of techniques that activate the mental and cognitive activities and creative abilities of the individual.
How could it be taught?	The purpose of the modern teacher is to facilitate students in gaining the necessary competences; amongst other things this

	means having students undertake tasks on their own, taking the necessary measures to approach and complete them. Teachers, in order to be able to do this, must themselves be competent in their professional activities.
How can it be assessed?	Assessment methods can include the periodic tests of progress, intermediate and final testing, including the final state exam.
With what criteria?	Criteria for assessing knowledge of the professional field can be: the ability to acquire new knowledge and skills independently; and to use them in the practice of professional activities.
GC12. The ability to communicate in official state, Russian and foreign languages	
What does this competence mean?	Mastering the techniques of working with oral and written text prepares students for a deeper and more adequate perception of both the humanities and their own professional area. Work to improve the cultural level of speech activity contributes to the formation of students' ability to communicate competently in professional activities and daily life.
How is it learned today?	Central Asian universities conduct language study by the traditional methods of reading and translation of texts, written exercises, dialogues and completing tasks.
How could it be learned?	Modern training sessions in official state, Russian and foreign languages, especially in higher educational institution not specifically oriented for language learning, should give training in communication of both non- professional and professional orientation, which determines the characteristics and the targets of each classroom session. Students need a good understanding of what they need to learn (linguistic and communications competences) and are taught in each class, as well as knowing how the acquired knowledge and skills can be implemented in real communication with native speakers.
How is it taught today?	In Central Asian universities language teaching is conducted by the traditional methods through reading and translation of texts and completing tasks. The adoption of new educational programmes, which has significantly reduced the learning of foreign languages at schools and universities, has affected the language proficiency of students, leading to large gaps in the knowledge of many young people.
How could it be taught?	Teaching can be carried out with the use of IT technology and innovative methods of language instruction, video and audio classes, the organization of ‘conversation clubs’ and motivating students to work independently for self-improvement.
How can it be assessed?	Oral questions, written exam (dictation, compositions), complex testing, oral presentations, presentation of homework, discussions, round tables, group work employing professional terminology.
With what criteria?	The ability to communicate in the state, Russian and foreign languages in educational activities and everyday life;

	the cultural level of communication; the ability to communicate competently; ability to listen and understand professional texts in the public and professional spheres and to communicate them in writing and orally.
GC13. Ability to lead people and work in a team	
What does this competence mean?	The ability to work in a team including being able to lead a team is very important for future professionals. It must be based on an integrated personal educational experience, including positive reasons for selection of a profession combined with systemic knowledge of the value, importance and ways of working in a team; the skills and abilities that allow for accumulating practical experience in the team, producing reflection, strengthening the values and finding effective forms of action and positive ways of dealing with problems of leadership, awareness of the result of activities which can be a product of intelligent teamwork.
How is it learned today?	The ability of students to work in teams include: the enrichment of the content of vocational training through multidisciplinary educational modules aimed at developing students' theoretical knowledge of the importance of and ways of working in a team, combined with practical work; the acquisition of the initial experience of teamwork; involvement of students in project activities, which ensures consolidation of values and ways of group forms of activities in solving problems.
How could it be learned?	Particular attention should be paid to "group targets" and the success of the entire group, which can be reached due to each member's working independently in constant interaction with the other members of the group with regard to a key issue to be studied. Therefore, the task of each student is not only to do something together, but also to learn something together, so that each member of the team masters the necessary knowledge and forms the necessary skills; at the same time, the whole team should participate in the experience of each student.
How is it taught today?	In the process of conducting seminars using interactive teaching methods (business games, brainstorming, focus work in small groups) in the process of training, traineeships and pre-diploma internships.
How could it be taught?	In encouraging students to acquire key competences, each team member should be motivated by the task set. The whole group should be interested in having each team member master the educational material, as the team's success depends on the contribution of each member, not only on solving problem jointly.
How can it be assessed?	By means of coursework, term papers, essays and articles, reports.
With what criteria?	Leadership and teamwork skills, the ability to interact with other people, ability to undertake various social roles in the team: mastery in holding discussions and debates in the group.

GC25. Ability to apply knowledge in practice	
What does this competence mean?	A young specialist must also have systemic competence. This includes: ability to apply knowledge in practice; research skills; ability to learn new things; ability to adapt to new occupations; ability to generate new ideas; leadership skills; understanding of cultures and customs of other countries; ability to work independently; initiative and entrepreneurial spirit; concern for quality; striving for success.
How is it learned today?	The ability of students to apply knowledge in practice developed through training and practical internships.
How could it be learned?	It is necessary for the student to learn to set priorities and identify key issues; in order to be able to do this he/she must handle the available information carefully; analyze and evaluate conflicting information; identify options, not only within a given problem but also considering other problems; find the correct solution of the problems.
How is it taught today?	Application of knowledge is taught in various ways and through different types of activities depending on the specific content of the material being studied. This can be in the form of educational exercise, laboratory work, practical research work etc. Students make a decision within a given algorithmic framework without mentoring or coaching.
How could it be taught?	Through the formation of the ability to find the best solution in practice and propose variants of solutions in difficult situations (for example, through the use of computer games, aimed at optimizing decision-making capabilities).
How can it be assessed?	The following forms of checking are envisaged in the internship programme: monitoring of progress in the form of practical assignments; intermediate check in the form of mid-term assignment ;final check in the form of the final report.
With what criteria?	Practical and pedagogical internship is one way to form the competence or "ability" to make decisions. Ability to apply knowledge in practice; research skills; ability to adapt to new occupations; ability to generate new ideas; ability to work independently; initiative and entrepreneurial spirit; concern for quality; striving for success.
GC18. Ecological and environmental responsibility	
What does this competence mean?	Rational use of natural resources; effective protection of the environment; ensuring food safety and secutiry; efficient use of land, agriculture and natural resources, thereby increasing the level and quality of life; support for socially disadvantaged groups through regional integration; evolution of common political values, systems and institutions; support for peace and security; and as a result gaining social growth and development in the state.
How is it learned today?	It is now becoming increasingly clear that technology alone cannot improve the environment, if people do not deliberately

	seek to comply with environmental constraints and take an active part in the practical solution of environmental problems.
How could it be learned?	Modern ecological education for sustainable (balanced) development is not limited to nature conservation and environmental management, but also includes general cultural education built on the integration of natural sciences, humanities and technical subjects.
How is it taught today?	Environmental education has given some positive results. However, as already noted, the level of theoretical knowledge of young students is growing, while the level of practical knowledge of environmentally sound activities to improve the environment is low.
How could it be taught?	By encouraging students' ability to carry out independently and apply comprehensively their general learning skills and subject knowledge generated in the classroom for the solution of environmental issues in educational (modeled) socio-environmental problematic situations; to learn how to assess risks and options for their solutions including personal involvement.
How can it be assessed?	Tests, oral and written assignments, participation in the discussions, presentations, writing research papers and performing creative tasks.
With what criteria?	Continuous grading system, knowledge and skills needed to protect the surrounding environment, ability to assess the environmental situation, ability to apply their knowledge and skills in a new social and environmental situation.

Table 8. **Approaches to learning, teaching and assessment: Subject specific competences for "Environmental Protection" in Central Asia**

SC1. Knowledge of the international, regional and national legal provisions for ecology, environmental protection and biosafety	
What does this competence mean?	Basic knowledge in the field of international, regional and national legal provisions on the environment, environmental protection and biosafety.
How is it learned today?	This is accomplished by examining the main international, regional and national legal provisions on the environment, environmental protection and bio-security, carrying out analysis and synthesis of their content with the aim of developing skills, as well as theoretical and practical knowledge in this field.
How could it be learned?	Through research and comparative analysis of the international, national and regional legislation.
How is it taught today?	In the process of teaching students are provided with extensive information of historical nature and current legislative acts, as well as with information on the optimal directions of further developments in this area.
How could it be	Teaching should be based on a problem-oriented approach,

taught?	which includes the elimination of gaps and irrelevant legislation.
How can it be assessed?	Assessment is carried out based on independent work of students (term papers, graduation theses), oral presentations, group work, participation in discussions and development of case studies. Assessment is also done by holding lectures with planned errors as a basis for practical exercises to identify and eliminate errors and weaknesses.
With what criteria?	Possession of knowledge in the field of international, regional and national legal provisions on the environment; the ability to apply them in practice to protect environment and ensure biosafety.
SC2. Know the basic principles and laws of ecosystem functioning	
What does this competence mean?	The ability to predict the effects of various factors on ecosystems, the ability to apply knowledge and skills to react successfully based on the effects of each factor on the functioning of the ecosystem.
How is it learned today?	This is done through research and comparative analysis of the interaction of living organisms and inanimate nature, which interact with each other and with their environment through metabolism.
How could it be learned?	Through researching and defining each element of the system and their connections, understanding the order of the elements in the system, determining the state of the system, connections and interaction between the elements and with the environment .
How is it taught today?	With the use of video tutorials and slides, based on interactive education.
How could it be taught?	With the application of IT-technologies, innovative technologies based on concrete examples.
How can it be assessed?	Assessment is carried out based on a list of requirements developed by the teacher for assessing the mastery of the given topic, with each requirement resulting in the certain number of points; by means of discussions and development of case studies. Assessment is also done by holding lectures with planned errors as a basis for practical exercises to identify and eliminate errors and weaknesses.
With what criteria?	Ability to predict the impact of factors on the ecosystem, ability to apply knowledge and skills.
SC3. Knowledge of the main principles of general ecology and rational environmental management	
What does this competence mean?	Basic knowledge in the field of conservation and sustainable use of natural resources, availability of natural resources and study of the environmental significance of natural resources.
How is it	By the formation of skills to formulate and solve research

learned today?	problems in the field of ecology, environmental management and conservation.
How could it be learned?	By studying the formation of skills for research work in the field of ecology and environmental management.
How is it taught today?	In the process of teaching students are provided with the information about the development of modern methods of environmental assessment.
How could it be taught?	Teaching should be based on learning the skills of planning environmental protection measures and rationalization of the use of natural resources, as well as on the formation of skills for advocacy, educating and teaching in the field of ecology, environmental management and environmental protection.
How can it be assessed?	Assessment is carried out based on independent work of students (term papers, graduation theses), oral presentations, group work, participation in discussions and development of case studies.
With what criteria?	The ability to predict the impact of various factors on the ecosystem; the ability to apply knowledge and skills to operate successfully on the basis of how each impacts on the ecosystem.
SC4. Knowledge of the basic elements of social ecology and demography	
What does this competence mean?	Formation of abilities to formulate and solve research problems in the field of ecology, environmental management and environmental protection and the formation of skills for forecasting environmental impacts of the use of natural resources, choosing the optimal way of utilizing natural resources and solving environmental problems.
How is it learned today?	Gathering and preparation of scientific materials; qualified preparation and execution of experiments and fieldwork; processing**,** discussion, assessment and publication of the results; participation in the development and implementation of new methodological approaches.
How could it be learned?	Through the study of interaction between man and nature, logic and methodology of transformation of the natural environment. Social ecology aims to understand and help bridge the gap between man and nature, between the humanities and natural sciences.
How is it taught today?	By providing information about the consistent patterns (laws) of relations between nature and society, which are as fundamental as the laws or patterns of physics.
How could it be taught?	By providing information about the consistent patterns of interaction of elements in the system "society - nature - man", and optimal interaction of the elements in this system.
How can it be assessed?	Assessment is carried out based on independent work of students (term papers, graduation theses), oral presentations, group work, participation in discussions and development of case studies.

With what criteria?	Ability to formulate and solve research problems in the field of environmental management of natural resources and environmental protection; formation of skills of forecasting environmental impact of the use of natural resources and choosing optimal solutions for environmental problems.
SC5. Knowledge of the basic techniques of environmental and food quality monitoring	
What does this competence mean?	Fundamental knowledge of the methods used for environmental studies, research methods of environmental pollution; knowledge of the basics of environmental monitoring techniques and use of environmental research methods in practice; knowledge of the peculiarities of ecological research methods, their classification and characteristics.
How is it learned today?	This is done through research and comparative analysis of the interaction of living organisms and inanimate nature, which interact with each other and with their environment through metabolism.
How could it be learned?	By acquiring knowledge about methods of identifying pollution: colorimetric, spectrophotometric, luminescent, atomic - emission, spectral in visible, ultraviolet and infrared parts of the spectrum; about methods of absorption spectroscopy; about chromatographic methods for determining pollution: methods of gas, gas-liquid, liquid, distribution, ion exchange chromatography, about electrochemical methods of determining pollution: classical polarography and oscillography; about basic methods of remote environmental monitoring; about basic methods of express- analysis (rapid analysis) of environmental situations; about basic methods of environmental regulation; about application of ecological research methods in practice and teaching this to staff and students.
How is it taught today?	In the process of training of students, by examining environmental pollution and analyzing the environmental situation.
How could it be taught?	Teaching is based on the factors which determine the formation of anthropogenic environmental pollution and quantitative measures of permissible anthropogenic impacts and burdens.
How can it be assessed?	Assessment is carried out based on independent work of students (term papers, graduation theses), oral presentations, group work, participation in discussions and development of case studies.
With what criteria?	Knowledge of environmental research methods and research methods of environmental pollution; mastery of the use of environmental research methods in practice; knowledge of the peculiarities of ecological research methods, their classification and characteristics.

SC7. Knowledge of the location of natural resources and of the basic manufacturing and non-manufacturing assets of the state	
What does this competence mean?	Basic knowledge of the essential characteristics of natural resources, concept of natural resources and the natural environment, economic evaluation of natural resources.
How is it learned today?	By the formation of ability to use of natural resources as a tool for lobbying the interests of the national economy.
How could it be learned?	By studying the skills needed for classification of natural resources on the basis of their renewability: whether they are exhaustible, including renewable (biological, land, water) and nonrenewable (mineral) natural resources; or inexhaustible natural resources (climate, energy of flowing water, etc.).
How is it taught today?	In the process of teaching, students are provided with information on classification according to the method of use and division of resources into sources of means of production and consumption: the resources of material production (industrial resources, including some industries, resources for agriculture and other sectors) and resources for the non-productive sphere (including the direct and indirect resource use).
How could it be taught?	Teaching should be based on learning the skills needed for planning the rationalization of natural resources; formation of skills needed for advocacy, educating and teaching in the field of ecology, environmental management and environmental protection.
How can it be assessed?	Assessment is carried out based on independent work of students (term papers, graduation theses), oral presentations, group work, participation in discussions and development of case studies.
With what criteria?	Understanding the concepts of natural resources and natural environment, knowing the methods of economic evaluation of natural resources and characteristics of natural resources.
SC8. Knowledge of safety technologies and the latest technologies of food production and storage	
What does this competence mean?	Ability to formulate and solve research problems in the field of safety technologies and the latest technologies of food production and storage.
How is it learned today?	Studying and analyzing materials in the field of safety technologies and the latest technologies of food production and storage.
How could it be learned?	Through the study of the innovations and initiatives in the field of safety technologies and the latest technologies of food production and storage.
How is it taught today?	By providing information about safety technologies and the latest technologies of food production and storage.
How could it be	By providing information about latest research and novelties in

taught?	the field of safety technologies and the latest technologies of food production and storage.
How can it be assessed?	Assessment is carried out based on independent work of students (term papers, graduation theses), oral presentations, group work, participation in discussions and development of case studies.
With what criteria?	The ability to formulate and solve research problems in the field of safety technologies and the latest technologies of food production and storage.
SC10. Knowledge of the global environmental and food safety challenges.	
What does this competence mean?	Knowledge of global problems in the field of environmental protection and food safety.
How is it learned today?	Currently it is studied through the analysis of global environmental issues in the area of environmental protection and food safety .
How could it be learned?	Through study and analysis of the findings in international scientific papers on global issues in the field of environmental protection and food safety.
How is it taught today?	Information is provided about the current global world challenges in the field of environmental protection and food safety.
How could it be taught?	By means of lectures and carrying out laboratory and practical exercises on the subject. In addition to providing information about the current global world problems, recommendations are developed for their forecasting and solution.
How can it be assessed?	Assessment is carried out based on independent work of students (term papers, graduation theses), oral presentations, group work, participation in discussions and development of case studies.
With what criteria?	Knowledge of global problems in the field of environmental protection and food safety.
SC19. Ability to apply methods of investigation and analysis of the chemical, biological, radiological properties and safety of natural resources.	
What does this competence mean?	Knowledge of and ability to apply research methods and analysis of chemical, biological and radiological properties and safety of natural resources
How is it learned today?	Through providing information by means of the traditional methods (lectures, seminars and laboratory classes).
How could it be learned?	According to the requirements of national and regional authorities on safe and rational use of natural resources
How is it taught today?	According to the state educational standards for higher education institutions for the given field
How could it be taught?	By providing information about existing methods of investigation and analysis of the chemical, biological and radiological properties and safety of natural resources.

How can it be assessed?	Assessment is carried out based on independent work of students (term papers, graduation theses), oral presentations, research and development projects, as well as in a retrospective way, analysising the level of knowledge and skills (abilities).
With what criteria?	Knowledge of and ability to apply research methods and analysis of chemical, biological and radiological properties and safety of natural resources.
Ability to make prognoses and work out recommendations for the prevention and/or liquidation of the consequences of anthropogenic or natural] emergencies	
What does this competence mean?	Knowledge of and ability to make predictions and recommendations for the prevention of natural and anthropogenic emergencies and elimination of their consequences.
How is it learned today?	Through providing information by means of the traditional methods (lectures, seminars and laboratory classes).
How could it be learned?	According to the requirements and recommendations of State and Regional Authority for Forecasting, Prevention of Emergencies and Elimination of their Consequences.
How is it taught today?	According to the state educational standards for higher education institutions for the given field.
How could it be taught?	By providing information about existing methods of investigation and analysis of prediction and recommendations for prevention of emergencies and elimination of their consequences.
How can it be assessed?	Assessment is carried out based on independent work of students (term papers, graduation theses), oral presentations, group work, participation in situational games and development of case studies on forecasting and recommendations for prevention of emergencies and elimination of their consequences.
With what criteria?	Knowledge of and ability to make predictions and recommendations for the prevention of emergencies and / or elimination of their consequences

8. Cycle Level Descriptors (with reference to Qualifications Frameworks) in terms of Learning Outcomes

In this part educational results which correspond to levels of the competences defined in point 6 are formulated as learning outcomes.

Descriptors of **the first cycle** include ability:

- to show knowledge and understanding of the studied area, including elements of the most advanced knowledge in the area of environmental protection and food safety;
- to apply this knowledge and understanding at the professional level;
- to formulate arguments and to solve problems in the field of research;

- to collect and interpret information for decision-making on the basis of social, ethical and scientific opinions;
- to distribute information, ideas, problems and decisions, both to professionals, and non-experts in this subject domain.

Descriptors of **the second cycle** include ability:
- to show knowledge and understanding received at the level of the higher education which are a basis for an origin or a possibility of development or application of ideas it is frequent in the context of scientific research;
- to apply knowledge, understanding and solve problems in new or unfamiliar situations and contexts in wider (or interdisciplinary) the areas relating to area of research;
- to integrate knowledge, to cope with difficulties and to express opinions on the basis of incomplete or limited information, on the basis of ethical and social responsibility for use of these decisions and knowledge;
- to formulate clear conclusions for experts and non-specialists;
- to continuously improve knowledge.

Descriptors of **the third cycle** include ability:
- to show systematic understanding of the studied area, skills of skill and the used research methods in the field;
- to plan, to develop, introduce and regulate the general process of research
- to make a contribution in in own research in expansion of borders of scientific areas which can be presented to the publication at national and international level;
- to critically analyze, estimate and generalize new complex ideas;
- to keep in contact with colleagues, scientific community and society concerning the knowledge and achievements;
- to promote the advancement of a society founded on knowledge.

Table 8 - Environmental Protection: Learning outcomes

Subject Specific competences	**Bachelor**	**Master**	**PhD**
To know the international, regional and national standards and legal status with regard to ecology, environment protection and biosafety.	To know standards and legal bases of the countries of the region in the context of ecology, environment protection and biosafety.	To be able to analyze and apply correctly the knowledge gained in carrying out research in the field.	To be capable of developing and introducing new ideas with regard to the standards and legal processes, international, regional and national.
To know the basic principles and	To know the fundamental principles of	To be able to apply the knowledge gained	To be capable to operate processes, to

regularities of functioning of ecosystems.	functioning and development of ecosystems.	to analyse the steady functioning of ecosystems.	make own proposals and recommendations for developments.
To know basic provisions of general ecology and the principles of rational environmental management.	To be capable to understand and distinguish terminology and definitions in the field of ecology and rational environmental management.	To masterfully use knowledge and to be legally and economically informed.	To be capable of formulating, approving and defending correct experimental knowledge at the scientific level.
To know basic elements of social ecology and demography.	To have a concrete base of knowledge and understanding of social ecology and demography.	To be capable of carrying out analyses and reflect the knowledge gained in charts and mathematical models.	To be capable of directing a group of employees and to be able to interpret scientifically the results of investigations.
To know the basic rules and methods of monitoring of environment and quality of foodstuffs.	To be able to distinguish knowledge and skills in the context of monitoring of environment and quality of foodstuffs.	To be capable of predicting and analyzing changes when carrying out monitoring and to be able to make recommendations about improvement of the situation.	To be capable of developing and introducing plans for improvement of the state of the environment, monitoring and ensuring compliance with sanitary quality standards for foodstuffs.
To know the locations of natural resources and fixed, business, and non-productive assets of the state.	To have overall knowledge in the field of the legislation, legal and standard documentation of regulation of business, and non-productive assets of the state.	To be capable to analyze and to scientifically prove the gained knowledge by further research.	To be capable of creating new progressive ideas and to carry out qualified work in collecting data about productive and non-productive resources of the state.
To know safe technologies and the latest	To be aware of new knowledge and understanding	To be capable of using modern methods in	To be able to use the received results at the

production technologies and storages of foodstuffs.	about safe technologies and latest technologies for production and storage of foodstuffs.	research on processes of production and storage of foodstuffs.	international and regional level for improving processes of production and storage.
To know global problems in the field of environment protection and safety of food.	To have information on the latest news in the field of environment protection and safety of food.	To be capable independently to analyze and be able to put forward own judgments concerning improvement of an environmental situation.	To be capable of assimilating the knowledge gained at the first levels and further extend it by introduction of new developments.
To own methods of research and the analysis of chemical, biological, radiation properties and safety of natural resources.	To know basic methods of research and the analysis of chemical, biological, radiation properties and safety of natural resources.	To be competent to take into account the end result and to apply the obtained data at the practical level considering the relevant purposes and tasks.	To be capable independently to develop new methods of research and analysis of chemical, biological, radiation properties and safety of natural resources, and to prove the data obtained by evidence, and apply it.
To be able to predict and develop recommenda-tions about prevention and elimination of consequences of an emergency of natural or technogenic character in the environment.	To know the terminology and the main concepts in the field of an emergency of a natural or technogenic character, to have an idea of the forecast, and develop recommendations about prevention and mitigation of the consequences.	To be able to interpret independently acquired results for drawing up plans for research and information collection, theoretical prerequisites and practical application.	To come independently to scientifically based conclusions, and be able to set tasks correctly in order to find reliable solutions to approach any emergency situation that develops.

Table 9 - Environmental protection -- Learning outcomes for the Key competences

	Bachelor	Master	PhD
General Competence			
1.	Understands methods of the analysis and synthesis.	Possesses basic knowledge in the field of methods of the analysis and synthesis. Is able to apply the newest methods of the analysis and synthesis.	Possesses broad knowledge in the field of innovative methods of the analysis and synthesis. On the basis of this knowledge is able to create optimal methods and perform knowledge management roles.
Subject specific competences			
1.	Knows the international, regional and national standard and laws on ecology, environment protection and biosafety.	Is able to put into practice knowledge in area international, regional and national standard and legal situation on ecology, environment protection and biosafety.	Is able to develop innovative methods of the solution of problems in the field of the international, regional and national standard legal statuses on ecology, environment protection and biosafety.
2.	Knows the basic principles and regularities of functioning of ecosystems.	Is able to put into practice the basic principles and regularities of functioning of ecosystems.	Is able to investigate the influence of climate change on ecosystems.
3	Knows basic principles of general ecology and the principles of rational environmental management.	Knows the latest achievements of science and is acquainted with the best domestic and foreign practices in area of basic provisions of general ecology and the principles of rational environmental management.	Is able to create own analytical models applying knowledge in the field of basic provisions of the general ecology and the principles of rational environmental management.
4	Knows the basic elements of social ecology and demography.	Collects and uses necessary data and effectively applies them to the solution of questions in the field of social ecology and demography.	Is able to predict the directions of development of social ecology and demography.
5	Knows the basic rules and	Conducts research effectively, applying the	Is able to analyze results of research in the field of

	methods of monitoring of environment and quality of foodstuffs.	basic rules and methods of monitoring of the environment and quality of foods.	monitoring of environment and quality of foodstuffs and develop new effective methods.
6	Knows the locations of natural resources, both the fixed business and natural assets of the state.	Is able to put into practice knowledge in the field of locating natural resources with regard both to business interests and the natural assets of the state.	Can analyze the results of research and create own research design and take decisions regarding the location of natural resources both of interest to business and to the natural assets of the state.
7	Knows the principles of safety and the latest technologies of production and food storage.	Is able to apply knowledge effectively in the solution of problems in the field of safety and the latest technology relating to production and storage of foodstuffs.	Is able to develop new safe and innovative technologies for the production and storage of foodstuffs.
8	Knows the global challenges in the field of environmental protection and food safety.	Is able to explore and analyze the global challenges in the field of environmental protection and food safety.	Can develop, promote and provide recommendations to address global challenges in environmental protection and food safety investigate and analyze the global challenges in environmental protection and food safety.
9	Knows and is able to use methods of investigation and analysis of the chemical, biological, radiological properties and safety of natural resources.	Is able to apply in practice methods of investigation and analysis of the chemical, biological, radiological properties and safety of natural resources.	Can develop and improve existing methods of investigation and analysis of the chemical, biological, radiological properties and safety of natural resources.
10	Knows the existing recommendations for the prevention and elimination of consequences of natural and man-made disasters.	Can conduct a study on the prediction and the development of recommendations for the prevention and elimination of the consequences of natural and man-made disasters.	Can predict and develop recommendations for the prevention and elimination of consequences of natural and man-made disasters.

Table 10 - Overall outcomes of the three cycles for Environmental Protection

Cycle	Knowledge	Ability	Level of autonomy and responsibility
Bachelor **Level 1:** Knowledge of the global challenges in the field of environmental protection and food safety.	Basic theoretical knowledge of the problems in the field of environmental protection and food safety.	Ability to solve the problems in the field of environmental protection and food security through research and analysis.	Be responsible for implementing the decisions regarding typical problems in the field of environmental protection and food safety.
Master **Level 2:** Ability to explore and analyze the global challenges in the field of environmental protection and food safety.	Advanced knowledge and understanding of critical global problems in the field of environmental protection and food safety.	Ability to apply innovative methods in solving common problems in the field of environmental protection and food safety.	Be responsible for the execution and management of research and analysis of problems in the field of environmental protection and food safety.
Doctoral **Level 3:** Ability to develop, promote and provide recommendations to address global challenges in the field of environmental protection and food safety.	Innovative knowledge and critical understanding of global issues in the field of environmental protection and food safety.	Ability to develop, promote and provide recommendations to address global challenges in the field of environmental protection and food safety.	Supervise the creation of innovative technologies in the development of recommendations to address global challenges in the field of environmental protection and food safety.

9. Conclusions

In the process of developing guidelines, the subject area groups studied and defined the features of the implementation of the principles of the Bologna process in the educational process, in particular the introduction of the credit system, recognition of credits or other measures of workload in the countries of Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan)

The Tuning project as well, in terms of educational and methodological support of educational programmes in the field of environmental pretection, and through the competence approach, allowed to clarify and define academic and professional learning outcomes, approaches to their evaluation (including evaluation by the students themselves). All this should lead to the optimization of the construction of curricula in accordance with the educational level and the professions the graduates will hold. As a positive result of the joint work on the project, it should be noted that effective scientific and methodological links with foreign universities have been established, providing access to new information resources and reference databases. Work on the project has permitted the development of international general cultural and general environmental competences, and implementation has allowed us to start the mobility of students. This confirmed the positive result of the mobility efforts of the working group.

It is important to note the contribution of European experts from the University of Pisa, who helped the Subject Area Group to solve many problems effectively.

10. Members of the Subject Area Group

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HISTORY

1. Introduction

The educational systems of most modern countries, including the Central Asian countries, are in the process of reform. Within the framework of the Bologna process, for example, universities in Europe seek to ensure harmonization of educational programmes. In this regard, it is particularly important to express the level of education and qualifications in terms of competences and learning outcomes. A key tool for solving this problem is the methodology developed in the framework of the international educational project «Tuning Educational Structures».

From the very start of the Tuning project in 2000 the subject area History was involved (Tuning Educational Structures in Europe, Tuning Latin America, Tuning in Georgia, in Kyrgyzstan, the Russian Federation). Since 2012 Tuning in History has been introduced in the United States, in cooperation with the American Historical Association. We trust that the results of the History group in the TUCAHEA project will contribute to enhancing the quality and transparency of the History subject area in Higher Education in the Central Asian Republics.

The Tuning approach allows to develop and implement, to evaluate and improve the academic programmes of the first, second and third cycles of educational programmes in Higher Education.

These recommendations can provide guidance and a common approach to developing special programmes in "History" in Central Asian countries. The development of comparable competences, objectives, goals, and skills in history learning and teaching will increase the competitiveness of graduates of the subject area degree programmes, and their use will contribute to the mutual recognition of diplomas, and the comparability of learning outcomes.

In all degree programmes in all higher education universities of Central Asia, national history is taught by teachers of the History Department.

2. Description of the subject area

The word "History" comes from the ancient Greek, where it meant "story", or "research" in the sense that it referred to what can be discovered through “investigation”. Currently, the term "History" has several meanings. On the one hand, History is any development in nature and society: in this case, we can talk about the history of a variety of objects and phenomena. On the other hand, "History" by definition refers to the past, as stored in writing, in archives or in the memory of people, as well as any story about the past.

In the framework of our project, the definition of "History" refers to one of the humanities disciplines. History in this case is a specific science (or a complex of

sciences), dedicated to the study of past human society in all its diversity. Accordingly, the subject of History can be all manifestations of human life, from the beginning of the origin of human society till the present time. The main task of history is to provide knowledge through the study and interpretation of the past of humanity, necessary for understanding of the current state of human society and foresight with regard to its future development.

History is a human science. Without studying internal experiences, and people's worldview it is not possible to investigate the history of certain period. Therefore historians should have an analytical mind, an ability to study the historical sources thoroughly, an ability to compare various materials to come to a balanced conclusion. Objective and fair interpretation of historical events depends on the level of knowledge of the historian and his or her possession of specific skills to work with historical sources.

History is one of the sciences that makes up the domain of Social and Human Sciences. It permits building a concrete and comprehensive picture of human development to understand better present and future perspectives; processes of social development, which include a complex of tools, methods, techniques, approaches in studying humanity, the priorities of public society, management of archives, problems of professional education, and methods and methodology of the study of the past of human society.

In **the Kyrgyz Republic** “History” is implemented as a profile in “social-economics education” **–** 550400**:** “History” (educational) “History” (humanities)
In **the Republics of Kazakhstan, Tajikistan and Uzbekistan** programmes are offered under the following titles: History” (educational), “History” (humanities) and “Archeology and Ethnology”.
In **the Republic of Turkmenistan**, the Resolution “About the confirmation of the State institutions of the professional education” issued on 03.20.2014, defines only the structure and activity of the State institutions of primary, secondary and higher education with two cycles of Bachelor and Master degrees: “The degree programme “History” (educational) prepares history teachers for high schools and colleges; the degree programme of "History (academic/research) prepares the scientific staff and employees of museums, archives, etc."

History as a subject of learning and as a science has several socially significant functions: cognitive (intellectual and developmental), ideological, practical and political, educational. The significance of this subject is highlighted by the fact that in Central Asian countries the subject "History of the Homeland" is situated in the block of compulsory courses at the end of which there is a State examination.

In all Central Asian countries curricula in "History” are provided separately in the History Faculties. In addition, in the framework of some curricula and courses in Humanities and Natural Sciences, students will learn history of the development of a particular field of knowledge and activities; this also indicates the importance of historical knowledge.

Thus, History is a diversified science, which comprises the following areas: World history, National history, Regional history. It has a close relationship with other Human sciences and allows selecting the following sectors of historical knowledge: Civil history, Political history, History of the State and Law, History of Economy, Military history, History of culture, music, language and literature. It identifies a number of additional historical disciplines, which contribute to addressing common questions on the methods and techniques of historical research: Archeology, Ethnology and Ethnography, Historiography, Source study, Methodology of History, Paleography, Heraldry, Numismatics, Chronology, Genealogy, Toponymy, Sigillography, Archeography, Historical Anthropology, and Historical Geography.

3. Degrees typically offered at the three cycle levels

The subject area "History" is divided into two groups: "Education" (a track for teacher training) and "Humanities" (for humanistic study and research) in accordance with the International Standard Classification of Education (2011) and the National Classification of Special Education in Central Asian countries.

In this subject area Central Asian universities implement the following basic educational programmes and award the following qualifications:

Levels	Name of Educational Programmes	Classification
First Level: Bachelor (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan Uzbekistan)	History (educational) History (humanities) Archeology and Ethnology Archival Science (Uzbekistan, Kyrgyzstan) Introduction to museums (Uzbekistan)	Bachelor
Second Level: Master (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan)	History (educational) History (humanities) Archeology and Ethnology	Master
Third level: PhD (in the Kazakh and Uzbek Republics)	History (educational) History (humanities) Archeology and Ethnology	PhD Senior researcher
Third Level (former model): Aspirantura Doctoral school (Kyrgyzstan)	07.00.02 – Homeland history. Branch of science in which the degree is awarded (Doctor, PhD of Historical Sciences) 07.00.09 - Historiography, Source Study and Historical Research methods. Branch of science in which the degree is awarded (Candidate of Historical Sciences)	Candidate of Historical Sciences Doctor of Historical

	07.00.07 - Ethnography, Ethnology and Anthropology. Branch of science in which the degree is awarded (Doctor, PhD of Historical Sciences) 07.00.06 - Archeology. Branch of science in which the degree is awarded (Candidate of Historical Sciences)	Sciences
Third Level (former model): Aspirantura Doctoral school Tajikistan	History	Candidate of Historical Sciences PhD of Historical Sciences Doctor of Historical Sciences
Third level (former model): Aspirantura Turkmenistan	07.00.00. Historical sciences and archeology 07.00.02. Homeland History 07.00.03. General history (Appropriate period) 07.00.06. Archeology 07.00.07. Ethnography, Ethnology, and Anthropology 07.00.09. Historiography, Source Study and Historical research methods ---------- 07.00.10. History of science and technology 07.00.15. History of International Relations and Foreign Policy 05.25.00. Documentary information 05.25.02. Documentary, archival science, documentary science 05.25.03. Library science and Bibliography	Candidate of Historical Sciences Doctor of Historical Sciences ---------- Historical, philosophical, physical and mathematical, chemical, biological, geological and mineralogical, geographical, medical, veterinary, architecture

In Uzbekistan there are two typologies. The Decree of the Cabinet of Ministers of the Republic of Uzbekistan "On measures to further improve the system of postgraduate education and certification of scientific and scientific-pedagogical personnel of high qualification" states that postgraduate education is identified as kind of continuing education aimed at ensuring that the scientific and scientific-pedagogical specialists meet societal needs.

Postgraduate education is carried out for three years in the following forms:
- Institute of Senior Fellows (Staff) Researchers;
- Independent research.

Institute of Senior Fellows (Staff) researchers is a form of postgraduate education of high qualified scientific and scientific-pedagogical specialists in their subject area organized in higher educational institutions or research institutions for awarding Candidate or Doctor of Sciences degrees. In this case the researcher possesses deep learning in the subject area and performs scientific research professionally.

Independent research is a form of postgraduate education of highly qualified scientific and scientific-pedagogical specialists in their subject area organized in higher educational institutions or research institutions for awarding Candidate or Doctor of Sciences degrees. In this case the researcher possesses deep learning in subject area and performs scientific research in parallel with other work.

A Senior Fellow (Staff) Researcher is a person enrolled in a Research/Education Institutions in this position. An independent researcher is a person enrolled in a Research/Education Institution.

4. Typical occupations of graduates at the three cycle levels

Traditional areas of activity of graduates are following areas: educational, research, cultural, public administration, political, and ideological sphere.

1. Bachelor (undergraduate)
In **all Central Asian** countries: 4 years (full-time).
In Kyrgyzstan, Tajikistan: 5 years (part-time).
In Kazakhstan: 2 years (part-time, distance learning/second higher education).

Places of professional activities: secondary, vocational education organizations including high schools, colleges, research institutions and organizations, training institutions, publishing houses, libraries, methodical departments, archive institutions, museums**.**

Graduates can work as: a teacher of History and related subjects in secondary, post-secondary educational institutions, including lyceums, gymnasiums, colleges; as an employee in archives, museums, as an expert in public institutions, as assistant deputies.

2. Master
In Kazakhstan (full-time only)
A) Core areas (administrative management, expert advisory, organizational-administrative, teaching activities). 1 year of study.

Places of professional activity: National, regional and district Departments of public education; regional and district teaching centers; control and analytical service of the Ministry of Education; National, regional and district cultural organizations;

government, sectoral archives (including a variety of private institutions); historical museums.

Graduates can work as: a History teacher in secondary and specialized secondary educational institutions, including high schools, gymnasiums, colleges; education manager, employee of research institutions, analyst in government offices, associate and adviser to deputies.

B) Scientific and pedagogical direction - (education, research, methodological, administrative, managerial, organizational and management activities). Graduates can work in the field of education; engage in research, methodical work, or carry out other professional activities - 2 years.

Graduates can work: as a History teacher in secondary and specialized secondary and post secondary educational institutions, including lyceums, gymnasiums, colleges; as a teacher in universities and institutes; as a History teacher trainer, education manager, employee of research institutions, analyst in government offices, associate and adviser to deputies.

In Kyrgyzstan, the Master's degrees in History is awarded after completion of two years of full-time education.
Code: 520800 "History".
Name of Curricula and tracks:
- 520801 - General history (CIS)
- 520802 - History of Kyrgyzstan
- 520803 - Archeology
- 520804 - Ethnology

In **Tajikistan,** there are full-time and part-time (distance learning) Master's programmes, lasting respectively 2 and 3 years.

In **Turkmenistan** Higher Education Institutions provide programmes of higher education (Master's degree) by full-time education. The duration of Master's educational programmes is usually from one to two academic years.

In **Uzbekistan,** Master's programmes in History entail two years of full-time education.

Types of professional activities in all Central Asian countries for History graduates:
1. Research
2. Organizational and managerial
3. Legislative and methodological
4. Pedagogical
5. Consulting

Graduates holding a Master's degree can:
- work in research institutions to carry out scientific research and teaching activities in the sociological, humanistic and historical faculties of universities and educational institutions;

- elaborate new scientific research documents, scientific literature or research papers related to their area of specialization;
- develop scientific conclusions on the research subject, write essays, and develop a bibliography;
- participate in scientific seminars and conferences;
- develop scientific articles for journals on their scientific research results;
- manage a team and organize research work in historical sciences;
- supervise using and researching archival materials on History;
- develop a quality management process for research activities and implementation;
- plan necessary resources for the processes of carrying scientific research and publishing its results;
- develop methods of monitoring and evaluation mechanisms on the creation and implementation of modern information technologies in the educational process;
- participate in formulating corporate technical policy using the basic principles of open systems for the development of modern information technologies;
- participate in the development of national standards and other normative documents in the field of education;
- participate in the creation of new research and scientific, pedagogical methods in the field of historical sciences;
- work in secondary education, vocational education, high education institutions and in research institutions, in museums, archives, state institutions etc.
- take part in expert groups requiring research expertise;
- provide consulting service on professional profiles.

3. PhD Doctoral studies

In **Kazakhstan** – Doctor of Philosophy (PhD) – 3 years of study.
Places of professional activity: higher education institutions; research institutions; departmental research organizations, government organizations.
Graduates can work as: teachers in higher education, employees of scientific research institutes, sectoral research organizations, and specialists in public administration, employees in commercial and nongovernmental organizations.

In **Kyrgyzstan, Tajikistan, Turkmenistan** - Candidate of Historical Sciences (3 years full-time aspirantura), Doctor of Historical Sciences (4 years). In 2015 Tajikistan launched pilot PhD programme (3 years).

In **Uzbekistan**, postgraduate education continues for the research period of three years (in the position of Senior Fellow (Staff) specialist or independent researcher).

5. The most relevant competences for the Subject Area

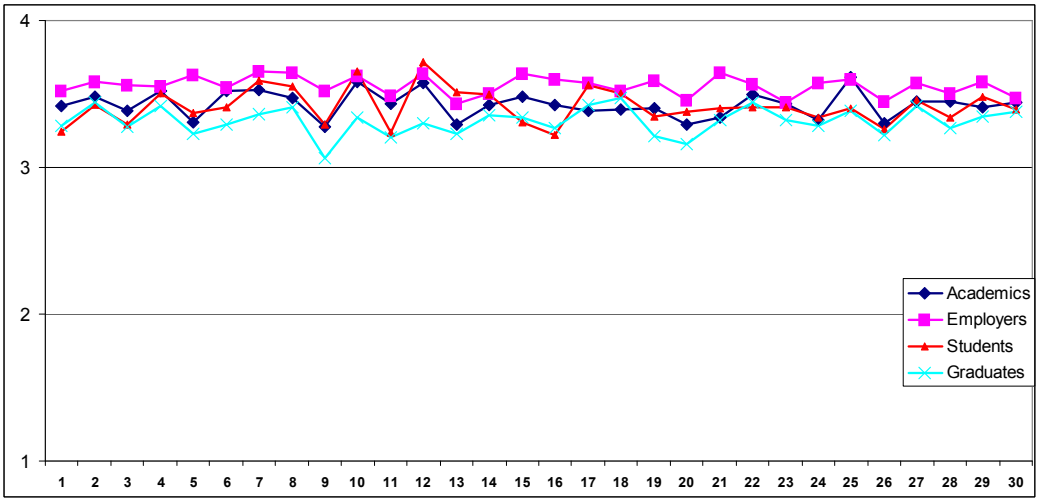
One of the main objectives of the project was to develop an agreed set of competences for the different levels of education. To determine the most important general and specific competences the Subject Area Group carried out a

consultation with the main stakeholders: representatives of the academic community (university professors), employers, students and graduates. Employers of graduates in "History" were identified as directors of high schools, heads of archives and museums, heads of government agencies.

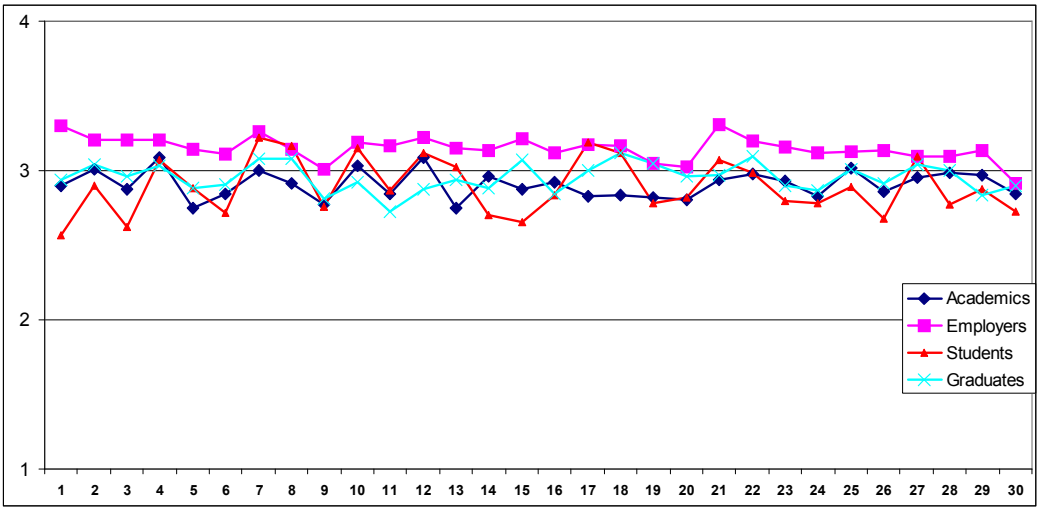
Thus 735 respondents in Central Asia participated in identifying the most important general competences for History, and evaluating their achievement. These included 319 teachers, 86 employers, 218 students, and 111 graduates. As for those who participated in evaluating the subject specific competences in "History", the data are as follows: the total number of respondents was 679 people, of which 305 were teachers, 78 employers, 199 students, and 97 graduates.

The stakeholder groups were offered the following list of 30 general competences:
1. Ability to analyze and synthesize
2. Ability to use logic and critical thinking for solving problems
3. Ability to model, design and forecast
4. Ability to carry out research applying appropriate methods
5. Ability to take initiatives and entrepreneurship
6. Ability to innovate
7. Ability to develop general knowledge
8. Ability to learn, including autonomous learning
9. Ability to communicate interactively and receive feedback
10. Knowledge of the professional field
11. Ability to communicate in a multicultural context
12. Ability to communicate in the official state, Russian and foreign languages
13. Ability to lead people and work in a team
14. Ability to manage information
15. Ability to use information and communication technologies
16. Social responsibility
17. Ability to follow a healthy lifestyle
18. Ecological and environmental responsibility
19. Knowledge of the laws
20. Ability to prevent and resolve conflicts
21. Patriotism and preservation of own cultural values
22. Tolerance and respect for others
23. Commitment to quality results
24. Flexibility
25. Ability to apply knowledge in practice
26. Orientation towards the needs of the user
27. Ability to work autonomously
28. Ability to adapt to change
29. Ability to make decisions
30. Time-management

The evaluation of the **importance** of the general competences by the respondents belonging to the "History" subject area was the following:



The evaluation of the level of **achievement** by graduates in the view of all respondents belonging to the History area was the following:



CORRELATIONS AMONG GROUPS

IMPORTANCE

	Academics	*Employers*	*Students*	*Graduates*
Academics	1,0000			
Employers	0,4308	1,0000		
Students	0,4582	0,3227	1,0000	
Graduates	0,5733	0,3156	0,4895	1,0000

ACHIEVEMENT

	Academics	*Employers*	*Students*	*Graduates*
Academics	1,0000			
Employers	0,4185	1,0000		
Students	0,3347	0,2845	1,0000	
Graduates	0,2392	0,2516	0,3795	1,0000

RANKING

	Academics	*Employers*	*Students*	*Graduates*
Academics	1,0000			
Employers	0,4269	1,0000		
Students	0,6616	0,5300	1,0000	
Graduates	0,4516	0,5379	0,5626	1,0000

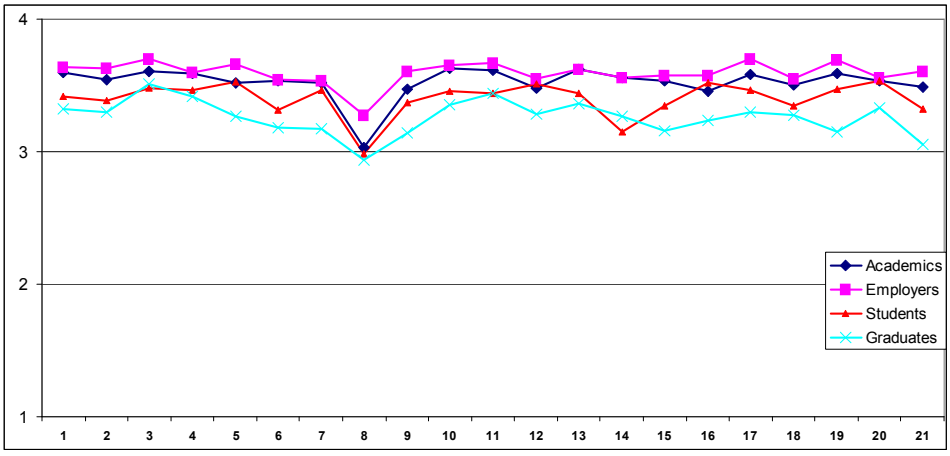
As subject specific competences the following were offered:

1. Critical understanding of the relationship between current events and processes of the past;
2. Understanding the differences in historiographical outlooks in various periods and contexts;
3. Awareness of and respect for national and universal values as well as social and ethical values, including customs and traditions.
4. Ability to understand problems and topics of National historiography;
5. Ability to use the terminology and techniques accepted in Historical science on Native and Foreign languages;
6. Ability to use information searching mechanisms, such as bibliographic collection, archival inventory;
7. Ability to use the technique of matching of historical dates (using statistics, mapping techniques, etc.);
8. Knowledge of the ancient language;
9. Knowledge of Local history;
10. Knowledge of National history as a part of World history;
11. Knowledge of the History of civilizations and World history;
12. Ability to use mechanisms of the special sciences/ Paleography, Epigraphy, Historical Onomastics/ allied/ Literary Criticism, History of language, Art history, Archeology, Anthropology, Law, Sociology, Philosophy etc. /in historical research;
13. Development of skills and ability to research activities;
14. Ability to identify a problem and formulate a research topic;
15. Ability to organize and interpret historical information;
16. Ability to comment, annotate process and historical texts, documents;

17. Ability to extract information from various sources, analyze it and correlate it with the knowledge gained in subject learning;
18. Ability of logical and imaginative exploration of historical reality;
19. Ability to apply modern methodological concepts of historical science in professional activities;
20. Ability to acquire new knowledge, using modern ICT technologies;
21. Knowledge and applying of didactics of history.

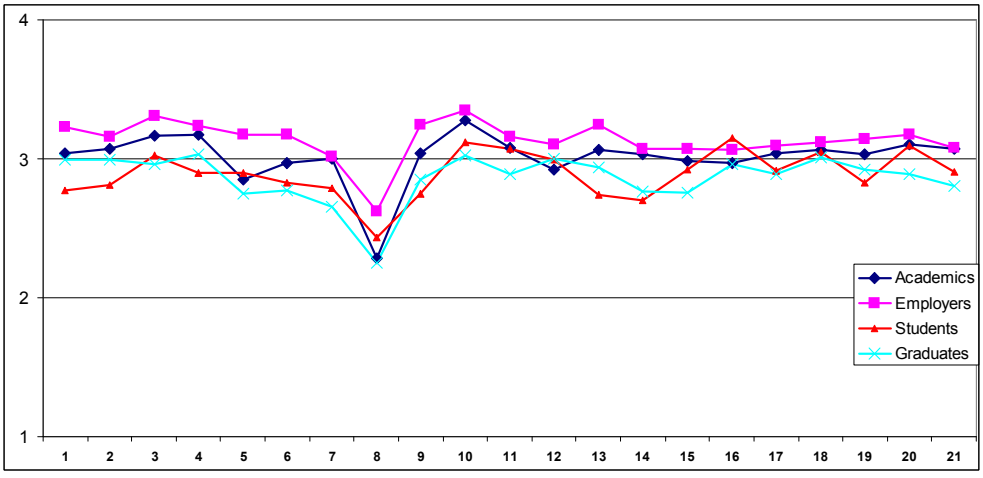
The evaluation of the **importance** of the subject specific competences by the respondents in the "History" subject area is as follows:

IMPORTANCE



The evaluation of the level of **achievement** of the subject specific competences by the respondents in the "History" subject area is as follows:

ACHIEVEMENT



CORRELATIONS AMONG GROUPS
IMPORTANCE

	Academics	*Employers*	*Students*	*Graduates*
Academics	1,0000			
Employers	0,8855	1,0000		
Students	0,6813	0,7198	1,0000	
Graduates	0,7223	0,6403	0,6052	1,0000

ACHIEVEMENT

	Academics	*Employers*	*Students*	*Graduates*
Academics	1,0000			
Employers	0,8824	1,0000		
Students	0,6426	0,5410	1,0000	
Graduates	0,8427	0,8271	0,6767	1,0000

RANKING

	Academics	*Employers*	*Students*	*Graduates*
Academics	1,0000			
Employers	0,5267	1,0000		
Students	0,8643	0,4775	1,0000	
Graduates	0,5645	0,4593	0,6317	1,0000

As a result of analysis and comparison of the lists of general and subject specific competences by relevance (ranking), allocation of general and subject specific competences considered by all or some groups as important, the following general and specific competences were identified as key competences:

Teachers	**Employers**	**Students**	**Graduates**
General competences			
Ability to analyze and synthesize Knowledge of the professional field Ability to use a logical and critical thinking for solving problems Ability to learn, including autonomous	Knowledge of the professional field Ability to analyze and synthesize Ability to learn, including autonomous learning Ability to develop general knowledge Time management Ability to	Knowledge of the professional field Ability to use logical and critical thinking to solve problems Ability to analyze and synthesize Ability to learn, including autonomous learning	Knowledge of the professional field Ability to use logical and critical thinking to solve problems Ability to learn, including autonomous learning Ability to analyze and synthesize Ability to apply

learning Ability to carry out research applying appropriate methods Ability to communicate in the official state, Russian and foreign languages Ability to apply knowledge in practice Ability to develop general knowledge Ability to innovate	communicate in the official state, Russian and foreign languages Ability to use logical and critical thinking to solve problems Ability to apply knowledge in practice Ability to take initiatives and entrepreneurship Ability to innovate	Ability to communicate in the official state, Russian and foreign languages Ability to take initiatives and entrepreneurship Ability to develop general knowledge Time-management Ability to innovate Ability to carry out research applying appropriate methods	knowledge in practice Ability to lead people and work in a team Ability to take initiatives and entrepreneurship Ability to communicate in the official state, Russian and foreign languages Ability to innovate

On the basis of the results of the survey of four categories, and after discussions of the History working group (SAG), the following most important general and subject specific competences were identified for the “History” subject area:

General competences:
1. Knowledge of the professional field;
2. Ability to analyze and synthesize;
3. Ability to use logical and critical thinking to solve problems;
4. Ability to learn, including autonomous learning;
5. Ability to communicate in the official state, Russian and foreign languages.

Specific competences:
1. Knowledge of National history as a part of World history;
2. Critical understandingof the relationship between current events and processes of the past;
3. Ability to understand problems and topics of National historiography;
4. Development of skills and ability to research activities;
5. Ability to acquire new knowledge, using modern ICT technologies.

These general and subject specific competences more clearly define the subject area of "History", highlighting the most important areas of activities of the future graduate in History. Achievement of these competences is obligatory for graduates of "History", independently of their future profession. These competences can be considered universal for graduates in Humanistic Sciences.
The competences selected cannot be considered without taking into account the social context and the ideological nature of the subject. In Central Asian countries, as elsewhere, the ideological component of the Historical sciences is a traditional justification for its study. History plays an important role in the formation of national consciousness and identity.

6. Cycle level descriptors (with reference to Qualifications Frameworks) in terms of competences

Level	Knowledge	Skills	Level of Autonomy and responsibility
GENERAL COMPETENCES			
GC-10: Knowledge of the professional field			
Level 6 (BA)	To have general knowledge of World and National History, chronology of historical events and facts, and to have acquired information on activities of historical figures.	Be able to formulate knowledge in the field of World and National History, to define historical events and facts in space and time .	Ability to use creatively knowledge of World and National History in various areas of professional work, including work at high school and communication with different audiences.
Level 7 (MA)	To have profound knowledge of historical processes in spatial and chronological frameworks.	To have skills of creative understanding of historical processes, definition of place of specific historical event in the general historical process.	Ability to use creatively knowledge of history in development of a specific scientific project.
Level 8 (PhD)	To have profound knowledge of history, including capacity for critical reasoning about historical events, facts, phenomena.	To have advanced interpretation skills of historical events, facts, phenomena; to be able to state research questions and basic hypotheses.	Ability to generalize and interpret historical knowledge; using those abilities in research work.
GC-1: Ability to analyze and synthesize			
Level 6 (BA)	To know the basis of methodology and source studies of history.	To be able to state and explain the essence of the method of analysis and synthesis.	Ability to analyze and synthesize in work with historical sources.
Level 7 (MA)	To know the correlation of general and specific techniques and methods of study of historical facts, events, phenomena and historical sources.	To be able to use skills of working with a method of the analysis and synthesis when studying sources of the specific research work.	Ability to analyze and synthesize during research work on a scientific project.

Level 8 (PhD)	To have profound knowledge of historical methodology.	To be able to correlate analysis and synthesis with other general and specific methods, and to be able to use this in historical research.	Ability to extract necessary information from research work sources, based on the analysis and synthesis method.
GC-2: Ability to use logical and critical thinking to solve problems			
Level 6 (BA)	To possess basic knowledge of logical and critical reasoning, which is necessary when studying history.	To be able to apply the knowledge gained in the study of logic, in the perception of historical processes.	Ability to use basic knowledge of logical and critical reasoning in practical work as a teacher of history.
Level 7 (MA)	To know the content and purpose of logical and critical reasoning to solve actual problems of historical science.	To be able to apply logical and critical thinking in the study of the historical past, as a whole, and individual facts, events, phenomena and stories.	Ability to use creatively knowledge of the methodology of history, laws of logical and critical reasoning in development of a specific scientific project in particular.
Level 8 (PhD)	To possess an integrated system of techniques and methods of historical research, being able to identify the place and role of a particular method of critical and logical thinking in historical methodology.	To be able to operate with logical and critical thinking in solving complex scientific cognitive tasks.	Ability to apply the methodology in the history of knowledge in professional work of researchers and teacher in high schools.
GC-8: Ability to learn including autonomous learning			
Level 6 (Ba)	To have basic knowledge of World and National History.	Ability to acquire knowledge during learning and independent work in libraries, archives, Internet resources, and ability independently engage in self-education.	Ability to use the knowledge gained creatively in professional work as a history teacher at schools.
Level 7	To have profound knowledge of World	Ability to apply the knowledge gained	Ability to generalize the knowledge and

(MA)	and National history, theory and methodology of historical science.	during the research on a scientific project.	formulate research problems, and develop own opinions on studied issues.
Level 8 (PhD)	To have advanced knowledge on actual problems in History and allied Humanistic Sciences.	Ability to formulate research questions and the main hypotheses on World and National history, ability to receive information from variety types and kinds of sources, from special scientific literature.	Ability to independently implement a research project, to defend own position in scientific debates and discussions.
GC-12: Ability to communicate in National, Russian and Foreign languages			
Level 6 (BA)	Knowledge of the theoretical and practical bases of functioning of the National, Russian and Foreign languages and linguistic connections.	Ability to carry out competently the main types of oral and written communications in the National, Russian and Foreign languages.	Demonstrate the ability to manage communication processes in various interpersonal relationships and professional fields.
Level 7 (MA)	Highly skilled knowledge of the methodological basis of the functioning of the National, Russian and Foreign languages as well as techniques and technologies of communication.	Ability to use correctly modern technologies in the implementation of the main types of oral and written communications in National, Russian and Foreign languages.	Demonstrate the ability to manage and create communication environments in different social groups and professional fields.
Level 8 (PhD)	Advanced knowledge in the field of legislation regulating the content of the National, Russian and Foreign languages as well as research and knowledge in the field of linguistic and philological schools.	Ability to diagnose on a scientific basis the dynamics of the development of the National, Russian and Foreign languages on various levels: the essential, meaningful, functional, status related, etc.	Demonstrate possession at a high scientific and professional level of National, Russian and Foreign languages as well as the ability to operate using them.

SUBJECT SPECIFIC COMPETENCES			
SC-10: Knowledge of National history as a part of World history			
Level 6 (BA)	To have a basic knowledge of the main stages of the historical development of one's own country, its relationship with the world historical process.	Be able to support one's own position on the problems on national, human and spiritual values on the basis of acquired knowledge of National and World history.	Ability to teach World and National history in secondary schools, the ability to defend a proactive position, guided by the idea of national independence.
Level 7 (MA)	To know positions and evaluations of the main European, American, Asian and National historiographical schools on the history of one's home country, to know the basic complexes of sources on National history.	Be able to analyze and forecast historical events and facts of National history, to determine their place and role in the world historical process.	Ability to use knowledge of national history in the system of pre-profile education and in scientific research.
Level 8 (PhD)	To know scientific theories, concepts, approaches and methods to understand the principles of formation, functioning and development of the National history as a part of World history.	Be able to select, analyze, process and apply historical information on the National history during the research project.	Ability to make a non-standard creative approach in the study of National history, to show depth of knowledge and erudition in the field of World history.
SC- 1: Critical understanding of the relationship between current events and processes of the past			
Level 6 (BA)	To know main historical processes of National and World history.	Be able to compare historical facts, events, phenomena of National and World history in the search for similarities and differences.	Ability to use knowledge gained in the professional field of work as history teacher.
Level 7 (MA)	To know the different approaches and assessment of historical processes	Be able to evaluate historical processes, based on general scientific and specific	Ability to use gained knowledge in different professional fields.

	in the past and the present, the content and purpose of criticism techniques used in analyzing historical sources.	ways and methods of research.	
Level 8 (PhD)	To have deep comprehensive knowledge of National and World history at various times.	Be able to compare and critical analyze historical events, phenomena of the past and modern history identify on this basis, problems and main trends of development of human society in the XXI century.	Ability to provide perspective variants of historical events, phenomena, processes, justify and defend them in public speeches during the scientific conferences, seminars, publications, scientific articles, monographs, doctoral thesis.
SC- 4: Ability to understand problems and topics of National historiography			
Level 6 (BA)	To know the basic features and peculiarities of the formation of historical thought and research methods.	Be able to extract information from historical and contemporary sources of knowledge, possess a system of knowledge about the basic stages of development of national historical science.	Ability to use knowledge gained in teaching activity.
Level 7 (MA)	To know the major historiographical problems (directions and schools) of National and World history.	Be able to use the historiographical knowledge to write a historiographical review in research projects.	Ability to use knowledge gained in teaching and research activities.
Level 8 (PhD)	To know the theoretical, methodological and specific historical views of most important representatives of leading historiographical schools and	Be able to analyze and compare the most important methodological concepts, operate freely with scientific concepts and terms in the field of historiography.	Ability to use the knowledge gained in the implementation of research projects.

	directions of foreign and domestic historiography.		
SC- 13: Development of skills and ability to research activities			
Level 6 (BA)	To have basic knowledge of National and World history.	To have skills in writing essays, reports on the specific topics of National, World history, on any section of theoretical and applied disciplines (additional historical disciplines, Source studies, Archeology, Ethnology, etc.).	Ability to use gained knowledge on the of public speeches at conferences, debates, the ability to carry out scientific supervision of students' research projects.
Level 7 (MA)	To have deep knowledge of the theoretical and methodological base and scientific instruments of historical science, philosophy, logic, historical informatics.	Be able to find, select, organize, and use various sources, including Internet resources in a research project.	Ability to solve independently scientific research problems by using achievements of historical and related humanistic sciences.
Level 8 (PhD)	To have extensive knowledge of the theoretical and methodological bases of historical science, related humanistic, natural and exact sciences.	To hold innovative strategy and tactics, methods of solving creative problems in scientific subject (historical) area.	Ability to study independently, to build own scientific research trajectory and defend it in scientific debates.
SC–20: Ability to acquire new knowledge, using modern ICT technologies			
Level 6 (BA)	To have basic knowledge in information and communication technologies in History teaching.	To have skills of work with educational / scientific literature and online resources and ICT on the History.	Ability to use innovative technologies to achieve the learning in history.
Level 7 (MA)	To have depth knowledge about the methods and techniques of using archival sources, materials, online	To have the skills in collection and systematization of historical knowledge, including Internet resources. To have	Ability to systematize information extracted from archival sources, Internet resources using ICT.

	resources and ICT in historical researches.	ICT skills in research projects.	
Level 8 (PhD)	To have advanced knowledge about the latest methods and techniques of identification, selection and use of historical knowledge.	Be able to conduct independent work on the search and collection of empirical data, professional evaluation of information sources, including ICT.	Ability to use ICT and Internet resources in history and in realization of research projects .

7. Approaches to learning, teaching and assessment

7.1. Common teaching methods in Central Asia

All Central Asian universities use comparable approaches, teaching methods and assessment of results.

Approaches to teaching:

Project approach: organization of the educational process: students' activities are organized for project based learning to get practical results and perform public presentation

Problem-based approach: organization of educational process: based on problem situations created by teachers.

Competence approach: organization of educational process: aimed at forming and development of competences.

Teaching techniques:

Advanced lecture: modified interactive lecture, with special breaks in the process of providing information. During the breaks, the learners interact with the teacher and with each other on the information, and they draw conclusions on each part of the lecture. An advanced lecture is completed by a ten-minute essay or other types of summarizing.

Method of forecasting (prediction): used at the beginning of the lesson in order to focus students' attention on the problem and to stimulate an interest to the material. Prediction may be for the title of the text and for keywords. Students write their suggestions in their notebooks and discuss in pairs or in groups.

Filling a heuristic table (strategy of working with information on a particular topic or issue): this consists of 3 columns. In the first is recorded everything that the student knows on the topic or problem, in the second column are written questions to which the students want to get answers; in the third column are written the answers to these questions, as well as new ideas.

Reading with notes: interactive noting system for effective reading and thinking. This method motivates students to understand information and have a dialogue with the text. The following icons are used: «V» (tick) familiar information, "+"

(plus): new information; "-" (minus): this is contrary to what you already knew, or thought you knew; "?" (Question): this is not clear, or if you want to get more information on this issue.

Filling in a conceptual card: the teacher asks students to represent schematically their own concept of the subject, in order to achieve new knowledge in the context of the knowledge acquired previously. The main steps:

1. Students will have a topic they know well or well enough;
2. Students make a list of ideas on the topic and write them on the board;
3. Categorical review;
4. Working out concept in groups;
5. Students graphically show the concept and establish strong and weak links between categories and individual concepts;
6. Preparing a presentation;
7. Presentation (taking into account the diversity of the views of all members of the group).

Rotation Method: a type of discussion on a certain scheme.

Discussions: cross-discussion, "Joint search", "Corners", web debate, Meta discussions.

Two-part blogging: an interactive technique of work with texts that involves recording the arguments of the student, his/her comments, and evaluations in the following form. The teacher asks students to select a few quotes from the text (lecture or tutorial) from the beginning, middle and end of the text. The quote should not be too long (one sentence, phrase, and word). Then the students draws a table of 2 columns: left and right. Quotes are recorded in the left column of the diary, and commens on it, association, reasoning or interpretations are recorded in the right column. Students take turns in discussing and commenting on quotes.

RAFT method: a kind of creative work that involves a student going through the process of "Role - Audience - Form - Theme".

Essay Writing: their types: argumenting, ten minutes, five minutes.

Web Quest technology.

Information and communication technologies.

Case studies.

Assessment:

Criteria Assessment: examination and formulation of criteria on the basis of which assessment, definition, or classification, can be carried out.

Feedback: can be direct or indirect, oral or written (questionnaires with closed or open questions).

Summative Quality Assessment: final test or exam.

Formative assessment: current assessment, teacher’s assessment as well as evaluation of the intermediate results of learning.

Peer-Assessment: carried out by students according to certain criteria or rules introduced to students in advance.

Self-evaluation: correlating students understanding of the assessment criteria with the requirements of teacher. It forms the ability of feedback and oral, written argumentation, and individually makes self-evaluation criteria.

Portfolio (Portfolio Assessment): collection of works of a student, fully demonstrating his or her learning outcomes, as well as the efforts made to achieve them. This targeted, systematic, continuous evaluation of learning outcomes provides a basis for a collective assessment.

Modern trends in assessment

- The practice of holding open exams, project activities;
- Assessment by students' participation;
- Assessment of the process of acquiring knowledge but not the result of knowledge;
- Evaluation of abilities, skills, competences;
- Formative, developmental assessment;
- Mutual assessment and self assessment in partnership.

Summarizing, we can conclude that contemporary assessment must:

- be flexible;
- use multiple tools;
- be clear/ transparent;
- be psychologically comfortable;
- use a combination of a **summative and formative assessment.**

7.2. Formation of specific competences with regard to their relevance, teaching and learning methods for implementation of competences

Formation of subject specific competences is based on the choice of a variety of teaching and learning methods. During the analyzing and reading of literature and sources students acquire knowledge and skills aimed at the formation of subject specific competences. Students get practical skills during practical seminars conducted by using innovative methods of teaching: project work, business and role-playing games, psychological training. Visualization techniques directed at self-improvement and self-realization of students can stimulate creative potential (slide shows, demonstration of historical and documentary films, visits to museums).

In the process of analyzing new material teachers train students' skills to identify problems, systematize and interpret historical information, treat and comment historical and scientific texts and documents. During joint discussions students can find options and ways to solve tasks and problems.

In the learning process competences are acquired by practical training: archaeological, ethnographic, archival, museum, educational.

7.3. Assessment of student's achievement in subject competences

In evaluating the student's progress through the implementation of various forms of competence assessment, written, oral and test forms are mandatory. In addition activities such as a round table, role-play, presentations, training videos (educational films), carrying out certain investigative actions, debates and disputes, and the like are used.

7.4. Most relevant competences for the first, second, third levels of education

All competences specified in paragraph 5 (subject specific and general competences) are relevant and implemented at all three levels of education, although the depth and directions of the implementation of specific competences varies with the level and specific orientation of the degree programme.

7.5. Examples of learning outcomes as criteria for evaluation

Examples and generalization of the practice of knowledge assessment

The system for checking educational achievements of students of higher educational institutions has different forms: periodic checking of progress, interim assessment of students and final state certification. All forms of assessing the educational achievements of students must be used in the educational process, regardless of the form of education.

Monitoring the students' progress is a systematic checking of educational achievements of students by teachers during classes in accordance with the curriculum of discipline. Monitoring the students' progress is carried out in accordance to the schedule of training sessions. The curriculum of discipline determines different kinds of monitoring: oral, written, testing, combined checks, presentation of homework, discussions, workshops, round table discussions, case studies, tests, etc.

Interim assessment of students in higher education institutions is carried out in accordance with the curriculum, the academic calendar (schedule of the educational process) and educational programmes. The period of interim assessment of students is defined as an examination session.

In checking educational achievements of students by means of examinations: higher education institutions independently (by the decision of the Academic Council) determine the form of the examination, such as oral questioning, a written examination, testing, integration testing, combined survey etc. Different types of testing may be provided, such as quizzes and questionnaires (manual test, using information technology, with different reading devices), computer testing.

Students who have fulfilled all the requirements of the curriculum and programmes are admitted to the final state certification.

The final state certification of students is the procedure conducted to determine the level of development of the state educational standards appropriate to the level of education. Final state certification is an examination of the knowledge, skills and

competences acquired by students during development of the relevant degree discipline. It is conducted in the form of a public educational standard: passing the state exam in the degree subject as a whole or for individual fundamental (basic and / or profiling) disciplines and defending of the degree thesis. On the basis of the results of the final state certification students are awarded an academic degree (BA, MA), and they receive a diploma of higher education.

Approaches to learning, teaching and assessment in relation to subject specific competences:

№	Competences	Methods	Evaluation	Results of evaluation
1	SC-10: Knowledge of National history as a part of World history.	Problem lectures, case studies, mind mapping,presentations, group work, individual work, discussion, excursion (museum, archive), practical training, work on the text and the original source.	Feedback, testing, analysis of case studies, reports on excursions / practitioners' description of artifacts, active participation in discussions, logical judgment, critical appraisal.	The service record, chronological table, essays, reports, articles, archaeological inventory / inventory, written work.
2	SC-1: Critical understanding of the relationship between current events and processes of the past.	The debate in the seminars, comparing historical sources and literature, interviews, oral questioning.	Active participation in the debate, check lecture notes, quality profiles, mutual evaluation.	Reference material, profile, abstract (writing).
3	SC-4: Ability to understand problems and topics of National historiography.	Method of research, presentation, advanced lecture method of rotation, essays.	The quality of written work, active participation in lectures.	Written work, presentations, essays.
4	SC-13: Development of skills and ability to research activities.	Organization of small conferences, analytical presentation, role play, group work, round table, forecasting.	Oral presentation of speakers, presentations, active participation in the preparation and conduct of conferences, round tables, and role-playing game, the quality of scientific reports, mutual-	Report, small conferences, presentations, role playing, organizational work, written work.

			evaluation, self-assessment.	
5	SC-20: Ability to acquire new knowledge, using modern ICT technologies.	Mind mapping, presentations (ppt, PREZI), the study of Internet resources, a critical analysis of the use of new ICT and e-learning.	Quality of mind mapping , presentation, accuracy of information, the Internet, the quality of information from electronic resources.	Reports, presentations, written work, background material, essays.

8. Cycle Level Descriptors (with reference to Qualifications Frameworks) in terms of Learning Outcomes

Learning outcomes based on the subject area qualifications framework are as follows:

- Knowledge of sources and historiography of National history;
- Clarifying the meaning and content of the historical events of National history, their place in the world historical process and the relationship with the World history;
- Ability to apply knowledge in practice;
- Development of skills and abilities for research activities.

After the **first level** of education, the Bachelor will have obtained knowledge and skills for practical and pedagogical orientation.
After the **second level** of education, the Master will have obtained knowledge and skills for practice, teaching and research focus.
After the **third level** of education, the Doctor will have obtained knowledge and skills with a practical, scientific, pedagogical orientation for the purpose of scientific research, the teaching of scientific and pedagogical staff.

Approaches to learning, teaching and assessment require a clear separation of the definitions of competences and learning outcomes.
Forming **Competences** is the aim of the educational programme; competences are expressed in language understandable to the employer (usually based on the competence achieved by the graduates with respect to various types of tasks and professional activities).

Learning outcomes are the concrete and measurable results of the educational programme (modules, disciplines, practitioners, and others.) and formulated as expected and measured "components" of competences: knowledge, practical skills, and experience, which should be formed and demonstrated by the student on completing the educational programme.

Below are examples of correspondence between general competences and learning outcomes at Bachelor (Level 6), Master (Level 7) and Doctoral (Level 8):

Competence	Learning outcomes
Possession of knowledge in the professional field	***Level 6*:** be able to describe the basic laws of historical development; reproduce course of historical events; determine the causes and consequences of historical events in the development of society, be able to demonstrate knowledge gained in the teachers' work and in the process of communicating with different audiences. ***Level 7:*** be able to compare and discuss assess the role and significance of historical events; understand the relationship of historical events, to distinguish public and private laws of historical events demonstrate existing knowledge in teaching and research activities. ***Level 8:*** be able to critically reflect modern concepts of historical science; classify and distinguish between scientific schools of historical science, analyze their theoretical and practical developments, and creatively apply historical scientific knowledge in the implementation of research projects.
Ability to analyze and synthesize	***Level 6:*** to describe historical events, facts, events, based on the analysis and synthesis, use the main philosophical categories used in the theory of historical science. ***Level 7:*** understand the essence of concrete and abstract of thinking, to systematize basic philosophical categories used in the theory of historical science, critically analyze existing concepts, theories and approaches to the study of historical processes and phenomena. ***Level 8:***lean on the basic philosophical categories in the formulation of the results of scientific research, have the skills and techniques of source criticism and historiography, to conduct independent scientific research, academic integrity is characterized on the basis of current theories and methods of analysis and synthesis of historical events.
Ability to use a logical and critical thinking to solve problems	***Level 6:*** allocate causal relationships is able to distinguish facts from assumptions and subjective opinion, to analyze information from the perspective of logic, be able to make informed judgments, decisions and apply the results to both standard and non-standard situations, issues and problems. ***Level 7:*** understand the essence of critical and logical thinking, apply the basic laws of logical thinking in addressing the educational and professional goals, analyze the direct and indirect effects of historical events and phenomena, to demonstrate independence of thought, consider the issue from different angles, to express various arguments and hypotheses ***Level 8:*** understand the principles and mechanisms of logical and critical thinking, to the use of critical thinking in the learning of the major and private issues of historical knowledge, express a reasoned opinion, demonstrate the depth and boldness of thinking, to realize analysis and evaluating the findings.

Ability to learn including autonomous learning	***Level 6:*** demonstrate knowledge of the basic ways to extract of historical information from educational and scientific literature, to identify the main sources of getting historical information, apply existing ways of working with historical source, independently find the necessary information. ***Level 7:*** formulate goals and objectives of the study, prepare a plan for independent activities of research; determine the intermediate steps, choose effective forms of self-control, to widen and deepen the knowledge, necessary for everyday of professional activities and continuing education in doctoral studies. ***Level 8:*** independently formulate goals and objectives of the study, propose and justify the research of hypotheses, organize, plan and carry out a process of scientific research.
Ability to communicate in the National, Russian and Foreign languages	***Level 6:*** demonstrate knowledge of grammatical and lexical rules of the state, Russian and foreign languages, to be able to perform basic types of speech and writing activities in the state, Russian and foreign languages, to be able to apply knowledge of languages in professional activities. ***Level 7:*** demonstrate knowledge of the basic rules of professional communication in three languages; be able to use language skills in study of historical sources in the original in different languages, to be able to use the knowledge of languages when writing scientific papers on national and world history. ***Level 8:*** know the basic rules of translation and summarization on the state, Russian and foreign languages, to be able to use scientific and professional style of communication in the state, Russian and foreign languages., to be able to discuss scientific issues in the professional field, including in a foreign environment, to be able to write research works in three languages.
Ability to lead people and work in a team	***Level 6***: describe the basic principles of team work, qualitatively fulfill its function as a team, to implement the interpersonal communication, plan activities and organization of work in a team and be able to prioritize. ***Level 7:*** demonstrate skills of team work, participate in the development of the general solution to the problem at on the basis of equal participation of all members of the team; provide advice to team members, demonstrate skills of leadership in communicating. ***Level 8:*** demonstrate excellent skills of business leadership, to identify team needs and find ways to implement them, objectively analyze their own actions and decisions and the team members' actions, and make the final decision.
Ability to innovate	***Level 6:*** reproduce information on the latest developments in the field of innovative technologies, use innovative technologies in teaching and practice. ***Level 7:*** demonstrate knowledge of basic techniques of the interactive study material, identify the latest achievements in the field of innovative technologies, to recognize changes in the external

	environment and change their behavior in relation to these changes, ability to use innovative technologies, forms and methods of teaching. ***Level*** 8 :explore innovations in various spheres of life, to assess their successful results and effectiveness, formulate professional goals, determine the methods of achieving them optimally and to rethink them in the course of professional work, solve professional problems with innovative means to demonstrate the ability to adapt of changing conditions, to conduct own innovative search and discovery.
Knowledge of National history as a part of World history	***Level 6:*** demonstrate knowledge of national and world history, obtain, collate and verify critical historical information obtained from various sources, to share national and world history into stages and evaluate historical events, confirm the arguments and facts in their own estimates of historical processes. ***Level 7:*** demonstrate in-depth knowledge of national history, apply knowledge of national history in defining its place and role in world history. ***Level 8:*** understand the general and specific laws of the world and national history, apply latest achievements in the study of the humanities general and specific processes of national history as a part of world history, to use the knowledge of national history in the implementation of research projects at the comparative study of current events and processes.
Critical understanding of the relationship between current events and processes of the past	***Level 6:*** characterize the relationship and draw parallels between the historical events of the present, past and future; explain the reasons and to predict the course of development historical processes, to be able to collate and compare historical periods. ***Level 7:*** demonstrate in-depth knowledge of the methodology of scientific knowledge; to identify, analyze and synthesize historical facts, phenomena and processes from the perspective of historical knowledge; to critically assess the course of historical processes in the realization of analytical work. ***Level 8:*** objectively evaluate current events and processes to apply critical thinking in the analysis of the main and private issues in past and present history; to analyze historical information based on comprehensive scientific methods, operate in modern of methodological principles and instructional techniques in the study of national and world history.
Ability to understand problems and topics of National historiography	***Level 6:*** identify key stages of formation and the development of historical thought, to identify general and particular in the development of foreign and national historiography, to understand critically analyze and present the basic of the historiographical information, to demonstrate a methodology for analyzing historiographical sources and scientific literature ***Level 7:*** demonstrate knowledge of modern concepts, achievements in the study of domestic sources, the national historiography, methodology of historical research; be able to apply the basic theory

	of scientific knowledge, independently identify and solve basic philosophical problems in the study of sources, historiography, methodology of historical research, to carry out expert and analytical work in the field of sources, historiography and methods of historical research. ***Level 8:*** have an understanding of the current state of historical research in the world and domestic science, demonstrate the ability to self-directed learning and the development of new methods of source and historiographical studies demonstrate the teaching methods of the national historiography, to apply the methodology of scientific research in the professional field.
Development of skills and ability for research activities	***Level 6:*** to represent the essence and content of research work, to reproduce the main scientific functions and methods of scientific research, to carry out bibliographical work using modern information technology, process the results, analyze and include them in a review of available scientific sources of data, demonstrate skills of formulating the outcome of the work done in the form of reports, course work. ***Level 7:*** be able to classify the different approaches and methods of scientific research work, determine the content of the problem studied, its place and significance in historical knowledge, synthesize, organize, and theoretically comprehend the empirical material, to choose necessary methods of research, to represent the results of completed research work in the form of scientific articles, designed according to the requirements, using modern means of editing and printing. ***Level 8:*** be skilled in conduction of independent scientific research on the chosen theme, using the methods and methodology of scientific research; generate own and new scientific ideas; share own knowledge and ideas with the scientific community, expanding the boundaries of scientific knowledge; modify existing and develop new methods, based on the specific tasks of scientific research; summarize the results of experimental research and analytical work in the form of theses, articles, reports; actively use the language of modern historical science.
Ability to acquire new knowledge, using modern ICT technologies	**Level 6:** to possess the ability to describe the basic techniques of using ICT in the study of history; understand the mechanism of the use of ICT and the Internet resources in the search and retrieval of historical information; apply in practice the possibility of Internet resources and ICT in learning and teaching of history. **Level 7:** be able to describe latest achievements in the field of innovative technologies, use them in implement of research projects. **Level 8:** be able to classify the ways of using ICT in the study of history; critically evaluate sources of information and the possibilities of their use in historical research; creatively apply knowledge of ICT in solving scientific problems.

9. Conclusions

A modern system of higher education consists of these two elements:

- Competence approach in teaching;
- Articulation of competences and learning outcomes.

It should be noted there are different levels of interest in participating in various aspects of the Bologna process and referrng to the Dublin descriptors or the QF for EHEA in national education systems in Central Asia. Our analysis revealed the following differences:

- Not all countries have moved to the three-circle system of education in higher education (BA-MA-PhD), and some countries are at the stage of implementation of the Bologna principles;
- There are differences in the definition of the scope and complexity of the student workload, i.e., some countries does not use the European credit system (ECTS);
- There are differences in the methods of assessment of students' knowledge.
-

10. Members of the Subject Area Group

The Kazakh Republic
Shotbakova Lyazzat, Karaganda State University after E.A.Buketov
Tueleova Bahytgul, Karaganda State University after E.A.Buketov
Smagulova Gulnara, Karaganda State University after E.A.Buketov
Abdrahmanova Kymbat, Karaganda State University after E.A.Buketov
Orazbekova Gulnur, Karaganda State University after E.A.Buketov
Narbekova Banu, Ministry of Education and Science of the Kazakh Republic
The Kyrgyz Republic
Duisheeva Nazira, Issyk-Kul State University after K.Tynystanov
Elvira Sagyntay kyzy, Issyk-Kul State University after K.Tynystanov
Eshieva Taalaigul, Issyk-Kul State University after K.Tynystanov
The Uzbek Republic
Shaidullaev Shapulat, Termez State University
Odiljon Hamidov, Termez State University
Bahriddin Talapov, Namangan State University
The Tajik Republic
Saidov Sulton, Tajik State University of Commerce
Turkmenistan
Nuryeva Kurbandjemal, Turkmen National Institute of Education
European Experts:
Janny de Jong, University of Groningen, The Netherlands
György Nováky, Uppsala University, Sweden

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LANGUAGE

1. Introduction

Since language is the most important means of communication for human beings, the study of language involves a wide range of disciplines in all countries. This is the first time that Language itself has been the object of a specific Subject Area Group in the Tuning project, although the Erasmus Socrates Thematic Network on Languages incorporated Tuning methodology, and related the areas of Linguistics and Literary studies have elaborated and published their own Reference Points thanks to the HUMART project.

Language, as a specific subject area, is an important priority in modernizing higher education and in building a higher education area. In the framework of the Tuning project a methodology has been designed to develop reference points for common curricula on the basis of agreed competences and learning outcomes as well as cycle level descriptors for many subject areas. General and subject specific competences developed within the Language Subject group in the TuCAHEA project will be essential in supporting language education in Central Asia and will be of great interest in other countries too.

Although Language was not included as a specific area in the European Tuning process in the first and second phases (2000 - 2004), the above-mentioned Thematic Network Project in the Area of Languages III (TNP3) incorporated Tuning methodology during the third phase of the Tuning project (2005 - 2006). The TNP3 consortium made the first determined effort at European level to promote a structured, comprehensive and continuous dialogue between higher education institutions and other stakeholders about changing and future linguistic and intercultural needs on the European labour market.

In the Tuning Russia project the Language Subject Area was considered as an independent one and a group of academics worked during the project to find common reference points for it. Within the Tuning Russia project a consultation process including employers, graduates and academic staff was organized in order to identify the most important generic and subject-specific competences in Language Area, those that should be formed or developed in different degree programmes.

Tuning in Kyrgyzstan did not comprise a Language group (neither did Tuning Latin America, nor Tuning Africa). Nevertheless, a Kyrgyz government decree on "Improvement of teaching foreign languages", was approved by Presidential Decree on July 1, 2013, and has set many tasks necessary for schools to promote the methodology and quality of international standard practice. In the Tuning USA project the Lumina Foundation has significantly sponsored a process designed to identify what students should know, understand, and be able to do in the sphere of Languages at each degree level in the discipline, and this process is referred to as Tuning, although languages are not defined as a separate subject group.

Language was included in the European Union projects before the TACIS projects which started work in the post-Soviet territory since the middle of the 1990s. TuCAHEA is one of the newer Tuning projects, and includes Language as one of its major aspects in order to develop competence-based language teaching.

2. Description of the subject area

The subjects of linguistics and foreign languages are taught in linguistic (specialized) and non-linguistic higher education institutions. The purpose of higher education in languages is to train specialists who meet the needs of society and master the state, Russian and foreign languages at a level recognised by the international community.

In addition to language training, it is crucial for future linguists, philologists, translators and language teachers to study other subjects included in a foreign language learning curriculum: for example, Language and Literature of the studied language, History of language, Country Studies, Country Culture, Intercultural Communication, Culture of Speech and Behavior, Ethics of the Studied Country, are all important.

Profile subjects, including linguistic disciplines, practical studies in foreign languages, as well as the essentials of the studied languages, have a particular place in the curriculum of each University, since the objectives of language learning are achieved in this context, i.e. mastering the rules of the language in its oral and written forms, obtaining theoretical knowledge about the target language or languages and ability to use it/them practically and theoretically for communication, translation and language teaching.

The curricula of philological faculties, in addition to the main academic programmes, include a variety of courses that provide students with unique opportunities for more in-depth study of language and literature, e.g., "The language of the Shakespearean plays", "Linguistic anthropology", "Ethnic and Linguistic Culture Studies", etc. The course “Linguistic and Stylistic text analysis", aimed at forming literary text analysis skills based on previously studied theoretical courses, plays an important part of in-depth training of future philologists. "The specialized course in the study of art materials" involves the further development of linguistic, communicative and intercultural competences of students on the basis of the best works of literature countries of the languages studied, and foreign films. Additional translation training (interpretation and translation) makes graduates more competitive on the labour market.

Modern living conditions, requirements for the future specialist, and new kinds of employment demand new approaches to teaching the future language specialist. At least a second foreign language is mandatory for a graduate. The scientific-technical revolution, which has resulted in an information explosion, lets an increasing number of specialists form direct international scientific-technical relations and expand their cultural and business contacts. The proper functioning of the international information system is impossible without experts in the field of

language: persons really fluent in foreign languages, able to extract information quickly from foreign sources, state it in their native language and use it in research.

The dissemination and study of foreign languages are the most important conditions for human progress. We need languages in order to gain knowledge and be able to use it in professional communication. The study of a foreign language in a non-linguistic institution is considered a mandatory component of professional training of a university graduate. The modern concept of higher language education presupposes the system of specialist training, which will allow the graduate to adapt easily to the dynamically changing conditions of professional activities, i.e. it is aimed at professionally-oriented language learning.

Professionally-oriented learning is based on the future needs of students engaged in language learning, as prescribed by the peculiarities of the future profession or specialty. It combines the study of professionally-oriented foreign language with the development of the personal qualities of students, knowledge of the culture of the country of the target language and acquisition of special skills based on professional and linguistic knowledge.

Foreign language communication has become an essential component of professional activity of specialists. Currently, a graduate must master communication skills both in native and foreign language, and also acquire professional knowledge. Present day training of a competitive specialist, mastering systems analysis and able to navigate in the rapid flow of scientific and technical information, is the primary task of higher professional education, set by the rapidly developing market economy. The competitiveness of a modern specialist in language is determined not only by his or her high qualification in the professional sphere, but also by willingness to solve professional problems in terms of foreign language communication.

3. Degrees typically offered at the three cycle levels

In Kazakhstan both linguistic (specialized) and non-linguistic universities provide language and foreign-language education at Bachelor, Master and PhD levels; in Kyrgyzstan, at Bachelor, Specialist (5 year education) and Master levels, in Uzbekistan and Tajikistan at Bachelor and Master levels.

A Bachelor's degree in language or linguistics is a basic course in higher education and provides fundamental and applied knowledge in language during a period of study of not less than 4 years. The bachelor level is the basic one in the multilevel structure of higher professional education of the Central Asian republics. The study period at bachelor level is 4 years. A university graduate must earn 128 credits (in Kazakhstan), or 240 credits (in Kyrgyzstan), to complete an educational programme in accordance with state standards. A bachelor's degree requires a full-fledged higher education in order for the graduate to be engaged in professional activities. The graduate can also teach at secondary school and colleges.

The first language is formed to increasingly higher levels of the European standard during the bachelor level degree programme in higher education. Teaching language for specific purposes (LSP) is combined with professional training. It allows students to master the language through the context of professional communication. Teaching language for academic purposes (LAP) provides continuity of learning between Bachelor and Master programmes and gives students the opportunity to receive overseas post-graduate education.

A Master's degree in language and linguistics is an academic degree granted to master students who are able to demonstrate mastery or overview of language and linguistics, and in this field comprises a study period of 2 years.
Master's school is meant to train scientific-pedagogical personnel for higher educational institutions and scientific institutions of the republics in Central Asia. The aim of the Master's programme is to train a new generation of specialists with an excellent knowledge of languages, able to compete both in the domestic and global market.

The range of Master's programmes includes various curricula. For example, in Kazakhstan, Master's programmes are divided into two types:
1. The specialized Master's degree programme implements educational programmes of post-graduate training, with in-depth training. The study period is 1 year.
2. The scientific-pedagogical Master's degree programme implements educational programmes of post-graduate training in the system of higher and postgraduate education and research sector, with in-depth scientific and pedagogical training. The study period is 2 years.

The duration of training of masters in linguistics in Kyrgyzstan is 2 years, and by the end of undergraduate education the student must earn 120 credits. The overall training period for future specialists of "Translation and Translation studies" is 5 years, and a graduate must have earned 300 credits.

The Doctoral level (PhD) is the highest level of academic training in the scientific system of the Central Asian republics. Educational PhD programmes are implemented in the research field of training and provide in-depth specialized training that enables graduates to engage in scientific, pedagogical, administrative and expert activities. PhD programmes involve active research, participation in international research projects, as well as in research projects of universities.

Kyrgyzstan
A Bachelor can convey information, ideas, problems and solutions both to specialist and non-specialists.
A Master can clearly and unambiguously express his/her conclusions, knowledge and rationale both to specialists and non-specialists.
Candidates of sciences can communicate with their colleagues and members of the scientific community and also within society in general about their areas of knowledge.

In Kyrgyzstan, the abovementioned principles are widely spread. Some universities had implemented the two level system of higher education in Kyrgyzstan even before the Bologna process was introduced. In 2011 the Ministry of Education and Science of Kyrgyzstan announced that all higher education institutions must work in accordance with the Bologna two level system of education. Since 2013, 6 universities in Kyrgyzstan have already defined PhD schools of natural sciences, but not yet in Language.

For Bachelor's degrees in Linguistics, Philology, Applied Linguistics, Intercultural Communication the study period is 4 years; in Translation Studies it is 5 years.
The duration of study in Master's school is 2 years depending on the specialization. Postgraduate school (PhD school) in language and linguistics usually lasts 3 years and 4 years in distance learning programmes. After successful defense of the PhD thesis, the title of Candidate of Philological Sciences is awarded, depending on the specialty code. For example, there are majors in Philology (Kyrgyz, Kyrgyz Folklore, Russian and other languages) and Comparative Historical Typological Linguistics (Germanic languages, Roman languages, Translation Studies, etc). The same majors are the rule for PhDs in the field of Languages. A PhD thesis in Language is the result of research, which aims at an important scientific discovery and gives a significant contribution to theoretical and practical Linguistics.

In Kyrgyzstan, in different subject areas universities are working according to temporary curricula that have not yet been officially approved. In the Language subject area the old system of higher education still functions, so that some universities have a new 3-level system (BA, MA, PhD), while others give the qualification of “specialist” (after 5 years of study). Academic titles after post graduate studies are Candidate of Sciences; after graduating from a PhD school, Doctor of Sciences. Some joint universities such as the American University in Central Asia, and Kyrgyz-Turkish Manas University give Candidates of Sciences the title of Doctors, although the old two level system still exists in Kyrgyzstan.

The following basic educational programmes and the preliminary version of the proposed model degrees in the language subject area are implemented in Kyrgyz universities:

1. Bachelor's degree (4 years of study)
531000 Philology
531100 Linguistics
531200 Computational Linguistics
531700 American Studies
531800 European Studies
550300 Philology (Pedagogy)

2. Master's degree (2-3 years of study with Qualification “Master of Linguistics)
531000 Philology
531100 Linguistics
531200 Computational linguistics
531700 American Studies

531800 European Studies
550300 Philology (Pedagogy)

3. Specialist (5 years of studies, specialty of higher vocational education with qualification of “Specialist”)
530003 Translation and Translation Studies (Qualification “Translator”)

Kazakhstan
The basic or first language is formed to the subsequent levels of the European standard during Bachelor level studies in higher education. Teaching language for specific purposes (LSP) is combined with professional training. It allows students to master the language through the context of professional communication. Teaching language for academic purposes (LAP) provides continuity of learning between bachelor and master programmes and gives students the opportunity to receive overseas post-graduate education. As in the case of the majority of the republics, Kazkhstan presents foreign language education in a specialized university in two cycles: the first cycle includes 1st and 2nd years, the second cycle the 3rd and 4th year.

The aim of the first cycle is teaching the basic foreign language at two levels of the European standard: B2 and C1 levels; the purpose of the second cycle is the formation of the basic language at the highest level (C2), and also language for special and academic purposes. The global trend to maintain linguistic diversity in a specialized university is reflected through obligatory learning of a second foreign language and teaching the Kazakh language for Russian speaking learners.

The programmes of each level ends with a final examination that is relevant to an international exam of a specified level in both the first and second foreign language. When students complete a given level of study whose programmes are based on the credit system of education, their achievements are recorded in an internationally recognized Diploma Supplement that provides an internationally recognized explanation of the level achieved, and facilitates recognition of Language degrees in other countries.

Bachelor level majors:
1. Foreign language: two foreign languages (Pedagogy, involving the knowledge of two languages)
2. Translation Studies
3. Philology/Foreign Philology
4. Turkology
5. Kazakh language and Literature/ English Language and Literature

Master’s level
The foreign language component of a Master programme in a language university includes using the first foreign language as a primary language for learning and professional scientific communication. A practical course in the second foreign language at the Master level should take place within the framework of C1 and C2 programmes. Foreign language education at Master level in a non-linguistic university meets the requirements of European standard C1.

Master's level majors:

1. Foreign language: two foreign languages (Pedagogy)
2. Foreign Philology
3. Translation Studies (translator/interpreter)
4. Linguistics
5. Philology
6. Kazakh Language and Literature
7. English Language and Literature
8. Turkology

PhD level majors

1. Foreign Philology
2. Foreign language: two foreign languages
3. Translation Studies
4. Kazakh language and literature
5. English language and literature
6. Philology

Tajikistan

First level: Bachelor

"Pedagogy", with a major in Foreign language
"Philology", with a major in Foreign languages (Theory and Practice of Translation)
"Linguistics", with a major in Translation and Translation Studies (First and Second Foreign languages)

Second level: Master

"Pedagogy", with a major in Foreign language
"Philology", with a major in Foreign languages (Theory and Practice of Translation))
"Linguistics", with a major in "Translation and Translation Studies" (First and Second Foreign languages)

Third level: postgraduate school

Research degree, based on individual scientific work resulting in the defense of a thesis in Linguistics or Philology.

Candidate of Philological Sciences

PhD is in progress (starting September 2014).

Uzbekistan

All requirements in the study of foreign languages are elaborated taking into account the CEFR (Common European Framework of Reference for Language) and the current programme of the Uzbek education system. Accordingly all graduates have attained at least the C1 level at the end of their 4th year of study at the university.

Furthermore, all the proposals organized on the basis of knowledge, skills and competences offered by generalist higher educational institutions are accepted. The Language subject area is divided into several sub-areas, such as Language, Linguistics, Language Teaching Methodology, etc. Approaches can be divided into

practical language and pedagogical language programmes. Moreover, the language can be Uzbek, Russian, English, German, French, Turkish, etc.

A **Bachelor's** degree in language or linguistics is a basic course of higher education and provides basic and applied knowledge in a language over a period of not less than 4 years.

A **Master's** degree in language or linguistics as an academic degree is granted to individuals who demonstrate excellence in research or higher level in language and linguistics, and train for a further 2 years. Graduates of this area must have deep knowledge of theoretical and applied issues; show high skills in language analysis, critical thinking and self-awareness as well as demonstrating a professional level of language skills, ability to solve difficult problems, and think rigorously individually.

A **PhD** in language is given to those who successfully defend their PhD thesis. A PhD thesis in language is the result of scientific research, which aims to contribute significantly to the theory and practice of linguistics.

In Uzbekistan students can achieve the following diplomas:
1st cycle: 5120 100 Philologist, teacher of English and German (second language); a bachelor's degree is awarded.
2nd cycle: 5A 120102 Linguistics (English); a master's degree is awarded
3rd cycle: scientific level (Doctor of Philology)

Turkmenistan
First level: specialty (5 years)
Graduates of all majors (English Language and Literature, German Language and Literature, French Language and Literature, Spanish Language and Literature, Russian Language and Literature, Persian Language and Literature, Arabic Language and Literature, Turkish Language and Literature, Chinese Language and Literature, Japanese Language and Literature, Korean Language and Literature, Hindi Language and Literature) are qualified: Language graduate, teacher, translator
Second level: postgraduate (3 years)
Third level: Candidate of Philological Sciences
Development of the PhD in Turkmenistan is in progress (starting September 2014).

4. Typical occupations of graduates at the three cycle levels

Professional activities of graduates in Modern Language and Literature (Philology), Pedagogy, and Translation Studies involve not only teaching, translation or scientific activities, but also advertising and PR, media and publishing, work in press service companies, state and public organizations. Graduates at bachelor's level can be engaged in both public and private sectors. Bachelors in Pedagogy are more focused in order to be able take teaching positions ranging from kindergartens to academic lyceum (or vocational colleges), i.e. educational institutions from primary to secondary vocational level. Holders of a master's degree in the field of language or graduates in linguistics may have more privileges

than holders of a bachelor's degree and they can take a higher position at work. However, most graduates of a master's degree continue their studies and research work. A master's degree is required for appointment to positions in universities or in research activities. Holders of a PhD degree in language may have more prominent positions in higher education, as well as in other public institutions and in the private sector. PhD holders can supervise scientific research in various research institutes and supervise the research works of graduate students and undergraduates.

The most common occupations in this subject area are: teacher, teacher-psychologist, teacher-speech pathologist, master of industrial training, educator, social worker, and teacher and translator/interpreter. The objects of professional activity by those holding Bachelor degrees are state and private education companies (elementary, secondary, special, vocational and technical organizations), the governing bodies of education. The objects of professional activity of those holding Master's degrees (in the field of vocational education - one-year master's degree) are educational institutions such as secondary schools, specialized schools, gymnasiums, lyceums. The objects of professional activity of Masters (in the field of scientific-pedagogical education with a two-year master's degree) are research institutes, higher educational establishments. The objects of professional activity of those holding a doctoral degree are research institutes, higher educational establishments.

5. The most relevant competences for the Subject Area

Tuning makes the distinction between learning outcomes and competences in order to distinguish the different roles of the most relevant players: academic staff and learners/students. Competences are developed during the process of learning by the student/learner. According to the definition used in Tuning, competences are everything that the learner knows, understands and is able to do at the end of a process of learning. Attitude and mindset are included in this very broad definition of competences. The purpose of the educational process is to foster the development of the learner's competences.

In Tuning, a distinction is also made between the competences that are directly connected to the disciplinary or thematic area of study (the "Subject Specific Competences") and those that are important in many or all areas of study. These are the "Generic" or "General Competences" in Tuning (GCs), and are similar to what are sometimes called 'transversal skills', that is abilities that are useful across many or all subject areas.

The first step in Tuning involves developing an awareness of the importance of the general competences in the educational process. Traditionally universities have concentrated on the transfer of knowledge specific to the area of study, and the formation of generic competences has been left largely to chance. In order to develop awareness of the importance of the generic competences, Tuners from each Central Asian countries developed lists of important Generic Competences, and carried out consultations on their relative importance and on the degree to

which they are currently developed by universities. The consultations took place with employers, students, graduates and academics.

5.1. General competences

In accordance with the current TUCAHEA Tuning methodology members of each subject group of each Central Asian country examined and discussed lists of General or Generic competences prepared in other countries participating in the Tuning project around the world (Europe, Latin America, Africa and Russia).
During the discussions and selection of key competences, working group members of each subject proceeded from the current situation of development of higher education in the country, the role of higher education institutions in society, and the possibilities of higher education institutions to develop moral, spiritual and ethical values among students.

Thus each country formulated its own key general competences. So, the list of Kazakhstan included 14 key generic competences, and Kyrgyzstan 10, other countries had higher numbers.

At the first regional plenary conference in Almaty, Kazakhstan (April 2013), representatives of all five Central Asian countries considered through round table discussions each general competence in Russian and English versions, and eventually developed an agreed list of 30 general competences for all Central Asian countries:

GC1 Ability to analyze and synthesize
GC2 Ability to use logical and critical thinking for solving problems
GC3 Ability to model, design and forecast
GC4 Ability to carry out research applying appropriate methods
GC5 Ability to take initiatives and entrepreneurship
GC6 Ability to innovate
GC7 Ability to develop general knowledge
GC8 Ability to learn including autonomous learning
GC9 Ability to communicate interactively and receive feedback
GC10 Knowledge of the professional field
GC11 Ability to communicate in multicultural context
GC12 Ability to communicate in official state and foreign languages
GC13 Ability to lead people and work in a team
GC14 Ability to manage information
GC15 Ability to use information and communication technologies
GC16 Social responsibility
GC17 Ability to follow a healthy lifestyle
GC18 Ecological and environmental responsibility
GC19 Knowledge of the laws
GC20 Ability to prevent and resolve conflicts
GC21 Patriotism and preservation of own cultural values
GC22 Tolerance and respect for others
GC23 Commitment to quality results
GC24 Flexibility
GC25 Ability to apply knowledge in practice

GC26 Orientation toward the needs of the user
GC27 Ability to work autonomously
GC28 Ability to adapt to change
GC29 Ability to make decision
GC30 Time-management

As the most important for the Language Subject Area in Central Asian countries the following competences were chosen:

Table 1 - Key General Competences for the Language Subject Area (new codes and original numeration)

GC1	(GC27)	Ability to work autonomously
GC2	(GC29)	Ability to make decisions
GC3	(GC8)	Ability to learn including autonomous learning
GC4	(GC10)	Knowledge of the professional field
GC5	(GC13)	Ability to lead people and work in a team
GC6	(GC25)	Ability to apply knowledge in practice
GC7	(GC22)	Tolerance and respect for others
GC8	(GC1)	Ability to analyze and synthesize
GC9	(GC6)	Ability to innovate
GC10	(GC20)	Ability to prevent and resolve conflicts

5.2. Subject specific competences

Before the first Plenary meeting in Almaty in April 2013, each Central Asian country also analyzed educational programmes, professional standards, and other regulatory documents, and consultations were held with experts and representatives of the Language community with the aim of formulating the subject specific competences for Language.

Employers, graduates, students and academics in all 5 countries were consulted as to the level of importance and achievement of the following 29 competences:

1. Ability to communicate in one's first language in different ways (oral, written) and contexts
2. Ability to communicate in the target language in different ways (oral written) and contexts (general, business, academic, professional, and multilingual).
3. Knowledge of grammar and ability to apply grammatical principles in the language/s learned.
4. Ability to build one's vocabulary, to use it with precision.
5. Ability to identify different registers of expression and to use them appropriately in communication.
6. Ability to write correct and effective as appropriate for different categories of readers
7. Ability to speak correctly and effectively in the languages known, as appropriate to the audience.
8. Ability to read and listen, distinguishing and analysing the linguistic and non-linguistic aspects of a text.
9. Ability to develop and apply effective strategies for learning languages

10. Ability to utilise computer-assisted language learning methods.
11. Ability to recognise and use non-verbal means of communication
12. Knowledge of the social and historical aspects necessary for learning and using the target language/s.
13. Ability to recognize and solve linguistic problems
14. Awareness of theoretical approaches in language learning and teaching and ability to apply appropriate methodologies in practice.
15. Ability to search for, retrieve, analyse and process information in the target language.
16. Ability to preserve, evaluate, and present national values in the language learned.
17. Ability to develop language skills continuously over time.
18. Ability to translate and interpret different types of texts and corpora.
19. Capacity to think and generate ideas in the language learned.
20. Ability to use the target language in practical situations.
21. Ability to use the language learned in one's professional field.
22. Ability to use the appropriate methodologies for different types of linguistic research.
23. Ability to reflect critically on widespread errors and misconceptions regarding language and language behaviour.
24. Ability to work with mass media sources in learning languages.
25. Awareness of the history, geography, economics, literature (etc.) relating to the target language.
26. Ability to use linguistic data in the construction of linguistic argumentation.
27. Awareness of the differences and similarities between the target and the native language.
28. Capacity of self-evaluation in language learning.
29. Ability to develop self-motivation in language learning.

Following the consultation and discussion in the subject area group (SAG) the following 10 subject specific competences were identified as being the most important for Language:

Table 2 - Key General Competences for the Language Subject Area

GC1	(GC27)	Ability to work autonomously
GC2	(GC29)	Ability to make decisions
GC3	(GC8)	Ability to learn including autonomous learning
GC4	(GC10)	Knowledge of the professional field
GC5	(GC13)	Ability to lead people and work in a team
GC6	(GC25)	Ability to apply knowledge in practice
GC7	(GC22)	Tolerance and respect for others
GC8	(GC1)	Ability to analyze and synthesize
GC9	(GC6)	Ability to innovate
GC10	(GC20)	Ability to prevent and resolve conflicts

Table 3 - Key Specific Competences for the Language Subject Area

SC1	No. 1	Ability to communicate in the native language (written and oral) in different situations
SC2	Nos. 2, 4, 9	Ability to communicate in the target language (oral and written) in various situations (general, business, academic, professional and multi-lingual) (at B2 level)
SC3	No. 6	Ability to write correctly and effectively, taking into account different categories of readers
SC4	No. 5	Ability to recognize the difference between expressions and registers to use them accordingly in communication
SC5	No. 9	Ability to develop and implement effective strategies in language learning
SC6	No. 10	Ability to apply methods of studying languages using computers
SC7	No. 16	Ability to save, measure and present national values in the target language
SC8	No. 17	Ability to work continuously on the development of language skills
SC9	No. 20	Ability to use the target language in practical situations
SC10	No. 28	Capacity of self-evaluation in language learning

Table 4 -Overall Table of Key general and subject specific competences for Language

General competences		Specific competences	
GC1	Ability to work autonomously	SC1	Ability to communicate in the native language (written and oral) in different situations.
GC2	Ability to make decisions	SC2	Ability to communicate in the target language (oral and written) in various situations (general, business, academic, professional and multi-lingual) (at B2 level).
GC3	Ability to learn including autonomous learning	SC3	Ability to write correctly and effectively, taking into account different categories of readers.
GC4	Knowledge of the professional field	SC4	Ability to recognize the difference between expressions and registers to use them accordingly in communication.
GC5	Ability to lead people and work in a team	SC5	Ability to develop and implement effective strategies in language learning.
GC6	Ability to apply knowledge in practice	SC6	Ability to apply methods of studying languages using computers.

GC7	Ability to be tolerant and respectful towards others	SC7	Ability to save, measure and present national values in the target language.
GC8	Ability to analyze and synthesize	SC8	Ability to continuously work on the development of language skills.
GC9	Ability to innovate	SC9	Ability to use the target language in practical situations.
GC10	Ability to prevent and resolve conflicts	SC10	Capacity of self-evaluation in language learning.

Table 5 - A helpful interpretation of the most important Subject Specific Competences in Language in Central Asia

Code	Competences	Interpretation
SC1	Ability to communicate in the native language (written and oral) in different situations.	Ability to communicate fluently in the native language; Ability to demonstrate knowledge of the basic terms and concepts in the field of theory and history of literature (literatures) and the main target language (languages), theory of communication, philological analysis and interpretation of the text, the understanding of history, modern condition and prospects of development of Philology; Knowledge of basic methods and techniques of different types oral and written communication primarily studied a foreign language. For a major: Knowledge of basic skills of creation on the basis of the standard methods and applicable standards of different types of texts.
SC2	Ability to communicate in the target language (oral and written) in various situations (general, business, academic, professional and multi-lingual)	Fluency in the main study a foreign language in its literary form (level C1 according to the common European framework scale of reference for languages); Ability to apply the acquired knowledge in the theory and history of literature (or literatures) and studied foreign language (or languages), communication theory, philological analysis and interpretation of the text in their own research activities; Skills of translating various types of texts (mainly scientific and journalistic) from a foreign language and to a foreign language; annotating and reviewing scientific papers and artistic works in a foreign language; Knowledge of basic skills of handling and processing (proofreading, editing, commenting, reviewing, etc. of different types of texts.
SC3	Ability to write correctly and	Knowledge of the basic methods, techniques and means of obtaining, storing, processing information;

	effectively, taking into account different categories of readers.	Understanding of the nature and significance of information in the development of modern society.
SC4	Ability to recognize the difference between expressions and registers to use them accordingly in communication.	Skills to interpret different types of texts, including to reveal their meaning and relationships that gave them the era, analysis of linguistic and literary material to ensure teaching process and popularization of knowledge; Ability to construct predictive scenarios and models for developing communicative and socio-cultural situations; knowledge of communication strategies and tactics, rhetorical, stylistic and linguistic norms and practices adopted in different spheres of communication, the ability to adequately use them when solving professional tasks.
SC5	Ability to develop and implement effective strategies in language learning.	Ability to demonstrate in-depth knowledge in the chosen specific language; Ability to demonstrate knowledge of contemporary scientific paradigm in the field of Language and the dynamics of its development, the system of methodological principles and methods in philological and linguistic studies; Skills of qualified analysis, annotation, summarizing and generalizing the results of research conducted by other professionals, using up to date methods and methodologies, advanced domestic and foreign experience.
SC6	Ability to apply methods of studying languages using computers.	Ability to obtain new knowledge and skills with the help of information technology and use them in practice, including new areas of knowledge that are not directly related to the scope of activities; Mastery of basic skills of acquisition and analysis of literary and linguistic facts using traditional methods and modern information technologies.
SC7	Ability to preserve, measure and present national values in the target language.	Willingness to respectful historical heritage and cultural traditions, tolerant of perceived social and cultural differences; Skills to participate in the development and implementation of different types of projects in educational and cultural institutions, socio-educational, humanitarian, organizational, publishing, mass media, and communication.

5.3 Meta-profiles in Language

A meta-profile reflects the structure and interrelation of competences that characterize a particular subject area. Meta-profiles are used for reference, depict

mental models and should demonstrate the variety of possible and existing degree profiles within a particular subject area. Meta-profiles are determined by analyzing stakeholder-consultation results through re-categorizing the competence list. Such re-categorization can be done differently in different subject areas and should reflect the subject area's unique characteristics.

For the Language subject area, the Tables that follow in sections 6 and 8, taken together, constitute a meta-profile.

6. Cycle level descriptors (with reference to Qualifications Frameworks) in terms of competences

6.1 Bachelor Level Competences in Language in Central Asia

A Bachelor in Languages should possess general cultural skills, be able to use oral and written language reasonably well and use the basic knowledge of a foreign language and the target language in the humanities, social and economic sciences in educational and professional activities, should respect the historical heritage and cultural traditions of the target language, be tolerant with respect to the perceived social and cultural differences, be able to think critically about the phenomena of social and cultural life; be able to perceive, analyze, synthesize information, set goals and choose the path to achieve it, be able to use social, educational and professional skills with the help of a computer; show willingness to cooperate with colleagues, doing teamwork; be able to make organizational decisions in unusual situations and willing to take responsibility for them; be aware of the social significance of their profession, have a high motivation for the profession, strive for and possess the necessary skills for self-development; be able to evaluate critically personal advantages and disadvantages, to choose the ways and means of developing his or her strengths and eliminate shortcomings; have skills of self-control and achieve an appropriate level of physical fitness necessary to ensure full social and professional activities.

Language Competences	Knowledge	Skills	Level of autonomy
SC1 - Ability to communicate in the native language (written and oral) in different situations. SC2 - Ability to communicate in the target	Understanding of language as a special social phenomenon (SC1, SC2). Knowledge of the grammatical, lexical and phonological system of the native language (SC1). Knowledge of the	Ability to demonstrate knowledge of basic terms and concepts in the theory of the native language (SC1). Ability to work independently with the literature	Ability to communicate in the native language (written and oral) in different situations (SC1) Ability to work independently (GC1) and to self-build his/her

language (oral and written) in various situations: general, business, academic, professional and multi-lingual (B2 level) SC4 - Ability to recognize the difference between expressions and registers and use them accordingly in communication SC7 - Ability to preserve, measure and present national values in the target language. GC8 - Ability to analyze and synthesize GC9 - Ability to innovate	correct approach to the selection and organization of educational material. (GC1). Knowledge of basic abstract and reference materials (GC1). Knowledge of grammatical, lexical and phonological system of a foreign language (SC2) (level B2). Understanding of a foreign language as a historically developed holistic system (SC4). Knowledge of basic registers of written and spoken speech of a studied language. (SC4). Understanding of communicational specifics as a special kind of activity (SC2, SC4). Understanding of the essence of the concept "intercultural communication" and its basic types (GC7). Know and understand the methods of analysis and synthesis (GC8) Know information and communication technology (GC9).	obtained during training (GC1). Ability to use e-learning, electronic books, electronic dictionaries, e-mail and similar (GC1). Knowledge of the main studying foreign language, in its literary form (level B2 of the European scale of competency in a foreign Language) Know the main methods, techniques and types of oral and written form of communication in the main foreign language (SC2). Ability to demonstrate and show the tolerance and respect for others (GC7) Ability to use information and communication technologies in practice (GC9). Ability to use abstracts and reference materials (GC9).	activity to master foreign languages (GC1-SC8-SC10). Ability to use the acquired knowledge and methodology for self-education (GC3). Ability to communicate in the target language (oral and written) in various situations (general, business, academic, professional and multi-lingual) (at B2 level (SC2, SC4, SC9). Ability to conserve, evaluation and presentation of national values in the target language. (SC7) Ability to make organizational decisions in unusual situations and show willingness to take responsibility for them (GC2). Ability to use

	Know the main methods, techniques and means of production, storage and processing of information (GC6). Know regional geographic, linguistic and cultural study materials about the country whose language is studied (SC8, SC10).		innovation and methods of learning languages with the usage of computer (GC9, SC6). Ability to use knowledge in practice (GC6).

6.2 Master Level Competences in Language

A Master in Languages should have preparation for fundamental research, or teaching, as well as professional training; he or she should demonstrate knowledge of modern information technology, foreign language communication and professional competence, deepening and expanding knowledge in the field of linguistic and linguo-didactic sciences, be able to formulate and solve modern scientific and practical problems, to plan and conduct research and research activity, teach at universities; be able to carry out research and management activities.

A Master in Languages must be able to demonstrate the following skills:

- Ability to recognize the differences of register and be able to use them in the communication process;
- Ability to develop and implement effective strategies for the study of languages;
- Ability to apply the methods of learning languages using a computer;
- Ability to maintain and evaluate national values in the target language;
- Ability to work continuously on the development of language skills;
- Ability for a self-evaluation in the study of languages.

Competences	Knowledge	Skills	Level of autonomy and responsibility
GC1 - Ability to work autonomously	Knowledge of the scientific approach to select and organize educational material.	Ability to work independently with the fiction and scientific literature produced during the educational process.	Ability to gain new knowledge independently with the help of computer technologies, to use in practice that knowledge even if not connected with the sphere of activity.
GC2 - Ability to make decisions	Advanced methods of critical thinking; Good oral and	Ability to take initiative, including in situations of risk, and be responsible for personal decisions;	Responsibility to make decisions for the organization of scientific research on priority areas

	written communication skills; Ethical commitments of the decision maker.	Stand by decisions and contributing to the systematicity and grounds for decisions taken collectively; Develop self-motivation and self esteem.	of science; Develop systematic and analytical thinking skills; Enhance capacities for innovation.
GC3 - Ability to learn autonomously	Knowledge of learning strategies and techniques; Learning in accordance with objectives.	Ability to improve and develop one's intellectual and cultural level; Comparing one's own ideas with those of others, using this as a learning opportunity; Gaining a comprehensive view of the different theories or methodologies of a subject.	Understanding and questioning the theoretical models of a discipline and exploring new fields of knowledge; Ability to implement independent learning using new methods of investigation, changing scientific and production profile of their professional activities.
GC 4 - Knowledge of the professional field	Advanced knowledge of grammatical, lexical and phonological system of the native and foreign languages.	Ability to build predictive scenarios and models of communication in given socio-cultural situations; Knowledge of the theory and practical skills needed to model the structure and the content of the educational process in the professional field.	Ability to use cognitive and professional activity of basic knowledge in the field of humanitarian, social and economic sciences; Awareness of the social significance of the profession.
GC5 - Ability to lead and work in team	Knowledge of the principles of effective communication.	Conveying confidence and moving others to action.	Delegation and empowerment; Communicating decisions with conviction to achieve group objectives.
SC6 - Ability to use IT in language learning	Computer skills, the use of internet and e-mail.	Creation of presentations, webpages, spreadsheets, etc Editing documents of a certain complexity.	Fulfilling academic tasks such as writing reports, essays and analyses.
GC7 - Ability to show tolerance and	Know historical heritage and cultural traditions,	Ability to participate in joint projects and implement them in the	Ability to work in an intercultural society in the context of

respect for others	be tolerant and accept social and cultural differences.	educational and cultural institutions.	globalization and internationalization in education.
GC8 - Ability to analyze and synthetize	Creativity; Innovation and knowledge transfer.	Utilizing analogies and synthesis to compare in order to reach goals; Integration and application of new knowledge.	Explaining complex ideas in simple ways; Find new solutions to problems; Use ideas from different disciplines.
GC9 - Ability to apply innovations	Organizational and social requirements and demands; Introducing new elements into processes.	Accurately detecting the needs for improvement and opportunities of a situation; Finding and analyzing different methods and alternatives.	Weighing possible changes and their effects; Foreseeing future risks or benefits to adapt the best solution for the situation.
GC10 - Ability to prevent and resolve conflicts	Good oral and written communications; Active listening.	Finding the positive and constructive side of a conflict; Reconciling conflicting points of view.	Positively and constructively addressing conflict by reflecting on the situation, defending own positions with skill and strategy.

6.3 Doctoral Level Competences in Language

The Doctoral level includes all the previous knowledge and skills acquired in the undergraduate and graduate level, as well as the ability to use the results of comparative linguo-didactic studies.

Competence	**Knowledge**	**Skills**	**Level of Autonomy and responsibility**
GC1 - Ability to work autonomously	Knowledge of research methods: qualitative and quantitative.	Ability of self-replenishment, critical analysis and application of theoretical and practical knowledge.	Independent work is not just a form of the educational process, but becomes the foundation of the formation of professional independence
GC2 - Ability to make decisions	Know the theoretical bases of decision-making methods.	The ability to use different technologies in resolving problems and making decisions	The responsibilityto make decisions forthe organization of priority scientific research.
GC3 - Ability to learn autonomously	Know the methodology of scientific	Development of individual linguistic and intellectual	Build and implement long-term professional self-

	research; achievements of world and domestic science in the field.	abilities(including creative, artistic) the personality of the student, their use in the process of contrastive language learning and mastering a second language.	development based on innovative trends in modern science.
GC4 - The acquisition of knowledge in the professional field	To have an idea of the theoretical and methodological basis of the development of world historical and linguistic peculiarities of the process and development of national languages.	Ability to produce knowledge of current trends, directions and patterns of development in the professional sphere in the context of globalization and internationalization.	Ability to prove an up-to-date scientific position using the particular facts of the subject matter.
GC5 - Capacity for leadership and teamwork	Knowledge of the key principles of teamwork.	Ability to solve complex problems by cooperation in a team, using team building principles	Demonstrate psychological qualities, skills and abilities to interact with a group, to ensure the successful implementation of tasks and functions of leadership and teamwork.
GC6 - Ability to apply knowledge in practice	To have an idea of the demands of certain period of social life associated with the linguistic and, in general philological education.	The ability to generate the knowledge needed to solve practical issues of activities (educational, research, social).	Willingness to participate in the development ofscientific, social, educational, creative,advertising, publishing and other projects. To contribute with their own original research in expanding the boundaries of the scientific field.

GC7 - Ability to show tolerance and respect for others.	To know the norms of cooperation in the scientific community, the issues of interpersonal communication and human resource management.	The capacity for inter personal and intercultural communication based on tolerance, knowledge of socio-cultural, linguo-cultural and linguistic priorities adopted in a given society and cultural norms of linguistic communication.	To have the ability to discuss and argue the classical idea ofthe linguistic subject according to the rules of scientific ethics. Be prepared to take an intercultural and personal features of other ethnic groups.
GC8 - Ability to analyze and synthesize	Knowledge of methods and theoretical foundations of analytical and experimental research activities.	The ability to synthesize information gleaned from modern scientific sources. The ability to relate the processes of development and use of different types of language with the socio-economic, cultural, historical, and political situation in the country.	A willingness to analyze, compare, and evaluate different points of view of scientists, scientific schools and orientations. The definition and formulation of the key problems of contrastive linguistics and theories of mastering a second language.
GC9 - Ability to use innovations	Knowledge of the main methods, techniques and means of production, storage and processing of information; understanding of the nature and value of information in the development of modern society.	The ability to work with different types of text editors; use computer techniques, information technology for the formation of subject competences.	The integration of modern information, computer technology in research activities.
GC10 - Ability to prevent and resolve conflicts	Knowing the psychological basis, characteristic	Ability to use the professional knowledge base to identify, prevent and	Ability to define methods, techniques, and styles of conflict resolution.

	features and symptoms of conflicts, and the methods to resolve them.	resolve conflicts.	
Subject Specific Competences			
SC1 - Ability to communicate in the native language (written and spoken) in various situations	Know the basics of scientific writing and scientific communication.	Mastery of the native language for scientific communication.	Ability to generate one's own new scientific ideas, inform the scientific community of one's achievements and findings, orally or in writing, expanding the boundaries of scientific knowledge.
SC2 -Ability to communicate in the target language (oral and written) in different situations (general, business, academic, professional and multilingual)	Know the basic components of metalinguistic Linguistics.	Ability to acquire systematic knowledge on philology and related sciences using the foreign and native languages.	Participation in scientific discussions, presentations with reports - oral, written and virtual (hosted in information networks); submission of their own research.
SC3 - Ability to write correctly and effectively, taking into account different categories of readers	Know the format for writing the main types of research materials: essay, article, memo, thesis and others.	Ability to express thoughts, plans and arguments, accurately, clearly and competently; properly select the type of message and the method of transmission through oral or written word, relying on pictures and diagrams, etc., taking into account the different categories of readers.	Mastering of speech culture, the culture of behavior, i.e., forms of written and oral communication, based on morality, aesthetic taste, and also subject to certain rules and regulations.
SC4 - Ability to recognize the	To know the main current	Ability to use linguistic knowledge	Ability to use of oratory and public

difference between expressions and registers to use them accordingly in communi-cation	trends in linguistic research in domestic and foreign science.	for the development of national identity, tolerance, the ability to enter into a constructive dialogue on professional, social and ethical topics.	speaking skills in international scientific forums, conferences and seminars.
SC5 - Ability to develop and implement effective strategies in language learning	Knowledge of efficient methods of management of research activities, the optimal and competent regulation of quality, content and size.	Ability to compare the positions of the various scientific areas and schools, highlighting the foremost positions.	Plan, develop, implement and adjust complex research processes; Identify creative solutions for linguistic problems in mastering a second language.
SC6 - Ability to apply methods of studying languages using computers	In depth knowedge of modern information, computer technology used in research.	Ability to work with different types of text editors; use computer techniques, information technology for the formation of subject competences.	Be ability to search for, find and transfer scientific and copyright information using modern and innovative information technologies.
SC7 - Ability to preserve, measure and present national values in the target language.	Knowledge of the basic categories of national values: national consciousness, national language, national culture, national identity, national traditions and customs.	Ability to apply fundamental knowledge of the system of native and foreign languages, the structure and functioning of their units in the process of interpersonal and intercultural communication, as well as to work with the texts on a specific subfield to form a professional outlook.	Ability to recognize individual national values as a relatively stable values, objects and phenomena, by which forms of culture are fixed in the desired direction, and are expressed in language.

SC8 - Ability to work continuously on the development of language skills.	Knowledge of the basics of speech activities, methods and techniques of continuous improvement.	Ability to improve oratory and public speaking skills at international scientific forums, conferences and seminars.	Ability to generate the knowledge required to solve practical issues of activities (educational, research, social); Identify creative solutions for linguistic problems while mastering a second language.
SC9 - Ability to use the target language in practical situations	Knowledge of stylistic, lexical features of general, business, professional language.	Ability to orient onself in a variety of modern linguistic concepts, apply theoretical and methodological knowledge in research activities.	Ability apply language skills in accordance with the actual situation.
SC10 - Ability to self-evaluate language learning.	Knowledge of the basics of reflection and self-evaluation as an important motivational factor affecting independent, active and creative mastery of a foreign language.	Ability to monitor and evaluate own activities not just in the classroom, but also in the process of self-education in order to maintain and increase the level of language proficiency.	High-levels of self-awareness, reflexivity, self-discipline, and personal responsibility giving the learner personal satisfaction as well as allowing for self-improvement and self-knowledge.

7. Approaches to learning, teaching and assessment

The main aim of language education is to prepare qualified specialists of the appropriate level and subfield, competitive on the labour market and in education, fluent in one's own profession and oriented in related areas, able to work effectively in the specialty at the level of world standards, ready for continuous professional growth, social and professional mobility.

Approaches to learning, teaching, and assessment optimally include process approaches to learning, practice-oriented, competence-based approaches, communicative and student-centered approaches.

Central Asian republics (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan) largely use traditional approaches to learning, teaching and assessment. New approaches in education allow achieving high results in the

language field: for example, useful methods include a clear indication of the goals of theoretical and practical classes, scoring of its stages, work in groups and pairs, selecting strategies, questions, special selection of tasks, clear criteria for self-evaluation.

These methods allow students to develop critical thinking skills, ability to ask questions and to defend and justify the decision of tasks in dialogues, helps to develop responsibility for learning outcomes. The stages of teaching are theoretical, analytical, practical and reflective, presented in the traditional form. There are evaluation criteria of results at each stage. Varied tasks and forms of evaluation will raise the students' level of awareness.

Approaches to teaching: teaching should be based on a combination of classical academic education with concurrent active implementation of innovative educational technologies. According to tradition, language teaching methods are divided into three groups:

- Methods of organization and implementation of the educational-cognitive activity:
  - Verbal, visual, practical (source presentation of educational material);
  - Reproductive, explanatory and illustrative, search, research, problematic, etc. (according to the nature of learning and cognitive activity);
  - Inductive and deductive (according to the presentation and perception of educational material);
- Methods of monitoring the learning effectiveness and cognitive activity: oral, written tests and self-control of acquired knowledge, skills and abilities;
- Methods of stimulating learning activities: specific incentives in shaping motivation, sense of responsibility, obligations, interests in the acquisition of knowledge, skills and abilities.

In teaching practice, there are other approaches to the definition of teaching methods that are based on the degree of awareness of the perception of educational material: passive, active, interactive, and others. These definitions require further clarification, because the learning process cannot be passive and they should made clear to students, who are not always aware of them. In the following table the members of the Language group defined the methods which are often used during in teaching languages:

№	**General Competence**	**Studying and learning**	**Level of evaluation**
1	Ability to lead people and work in a team	Lectures, situational study, role play, group exercises, competitive exercises on language; Group work, work in pairs, joint projects, students' presentations.	Assessing the work of fellow students, and the behavior of the student during discussions and presentations, work in a pair or group, etc.
2	Ability to learn including	Lectures, situational study, debates, panel discussions, presentations of individual projects	Self-awareness; objectivity; orientation for future

	autonomous learning	individual study of materials by students' interpersonal communication, solidarity, students, groups of commands; self assessment, peer assessment.	plans; recognizing or distinguishing achievements and mistakes in action.
3	Knowledge of the professional field	Situational games in language debates, panel discussions; Availability of lesson objectives, successive steps of the lesson, in accordance with the purpose, that is the skills that students should have at the end of the lesson, and logical use of the structure of the lesson, the proper distribution of time between exercises and assignments.	Lesson plans designed by students based on the communicative approach and regarding the main aspects (vocabulary, grammar, reading, writing, speaking and listening).
4	Ability to communicate in the native language (written and oral) in different situations	Assignment to use their native language in various situations; Assignments on the communicative (writing and speaking) skills; Analysis of speech and writing; Examples of how to use a critical assessment of the situation and argumentation of opinions; Exercises to consolidate the acquired material.	Evaluate the active participation of students in the classroom; Use of appropriate and literate speech; Demonstration of literacy at the level of communication both in writing and orally; Essays, papers, presentations, final projects and participation in student conferences, debates and discussions.
5	Ability to communicate in the target language (oral and written) in various situations (general, business, academic, professional and multi-lingual)	Ability to communicate in the target language can be developed in situations that are close to reality in order to build on the need for communication and expression of one's thoughts, as in the use of role-play, debates on specific topics and the like; Ability to use written communication with other cultures in a variety of contexts: e.g. formal assignments, personal letters, memos, etc.; Innovative methods of using information technologies; Ability to communicate may be	The student's ability to interact linguistically; Propriety of language accompanied by fluency of conversation; Logical content of speech and semantic coherence of statements; Appropriate registers, format and informal, of speech in the case of assignments and tests in the target language.

		expressed through participation in electronic chats, Skype, chat, video conferencing, etc.; Participation in role play, discussions; Writing different types of letters, documents.	
6	Ability for self -assessment in the study of languages	Using a variety of strategies for meaningful reading, drawing attention to conceptual issues regarding the texts; Writing a research paper (student essay, final project and portfolio*); Understanding by the students of a read text; Replies to questions and tasks relating to the texts.	Oral discussion; Essay evaluation according to given criteria; Written comments of the teacher; Oral and written evaluation of the students their responses; Assessing oral presentations on the following criteria: oral presentation skills, eye contact, time management, content.
22	Ability to act on the basis of ethical reasoning	Academic ethics education aims at: Understanding contemporary standards of etiquette and ethics of communication; Development of interest in ethics and etiquette issues in the field of cultural and business relationships; Creating a pleasant communication atmosphere Effective communication during and after training Demonstration of own integrity, honesty and sincerity. Ability to create an environment of security and support, providing a permanent mutual respect and trust Evaluation of what is happening in today's world events related to the ethical and etiquette norms of cultural and business cooperation; Using knowledge of ethics and etiquette in practice, correlating strategy of behavior in different situations with generally accepted	Assessing the results of communication in the target language. Use situational exercises to use elements of ethics of communication in the target language. Use written and oral tests for compliance with the ethical standards of the target language culture.

		moral position; Using modern methods of psychology in the analysis of situations. *Interactions in the language:* Foster an atmosphere of trust business communication with the other; Organize and conduct negotiations, telephone conversations in accordance with the requirements of business ethics and etiquette of the target language; Apply the methods and means of knowledge for intellectual development to enhance the cultural level of professional competence.	
18	Commitment to the environment	Understand the value of the environment and the culture to preserve it; Use different ways to preserve the environment in the context of globalization; Read texts on the protection of the environment in the target language and discuss them.	Organization of discussions on environmental issues in the target language, writing essays on the topic.
Subject specific competences			
№	Competence	Studying and learning	Level of evaluation
16	The ability to preserve, evaluation and national values in the target language.	Education and development of a high moral responsibility, creativeness, proactive competence of citizenship; Training elements of foreign language culture in comparative form; Knowledge of own national culture and values, as well as the assimilation of spiritual values of the target language; Study of elements of intercultural communication; Mastering various means of international communication in reading texts and materials in the target language;	Test tasks on their own knowledge of the elements of culture of the foreign language and the target language too. Slide show with the elements of culture of the national language.

		Understanding the spiritual values of the target language people; Developing the public and national consciousness via reading and review of media.	
17	The ability to continuously work on the development of language skills.	Develop skills for mastering the target language vocabulary; Motivation and stimulation to communicate in a foreign language, overcoming the language barrier; Discussions in the language, organization of presentations on the studied foreign languages; Team debates in class; Writing the final project of student projects; writing essays, translated lierary works, etc.	Assess the quality and quantity of students' participation in discussions and debates on the correct usage of idiomatic and other linguistic units in the language.
1	Ability to communicate in the native language (written and oral) in different situations.	Conduct a series of events to form a patriotic attitude towards the native language, the priority of the native language, the use of a situational approach. Motivation to read classic literature and periodicals in the mother tongue, fostering the need for appropriate situations to speak in the native language.	Evaluate the ability to adequately respond to the issues, ability to coherently and consistently present their own way of retelling the text.
2	The ability to communicate in the target language (oral and written) In different situations (general, business, academic, professional and multi-lingual).	The use of the whole complex of methods to develop the skills of speaking, writing, listening and reading, based on the professional vocabulary, professionally-oriented situational method; Motivation to replenish, update, and enrich the professional vocabulary, use of electronic and other resources involved in various activities of scientific and other directions for the development of communication skills.	Assess knowledge of professional terms, the ability to respond adequately to the questions, the ability to communicate freely in a foreign language according to the situation.
6	The ability to write correctly and	Apply methods aimed at developing writing skills; use the practice of correction and verification of the	Test the assignments on the spelling of texts, performing tasks,

	effectively, taking into account the different categories of readers.	correctness of the texts on the style and grammar of the language. Use the practice of writing texts through listening, adjust the text, develop the ability to write essays and other written work for different categories: children, experts, average reader.	preparation of written materials for different categories of readers.
5	The ability to recognize the difference of expression and registers respectively use them to communicate	Use methods of stylistic analysis of different expressions, idioms, professional vocabulary; Conduct analysis of different written and spoken texts in order to monitor a variety of expressions, motivation and their use in the spoken or written language.	Test tasks on the sample of certain expressions related to various professional orientations. Check the ability to use an expression properly.
9	The ability to develop and implement effective strategies for the study of languages	Monitoring the effectiveness of techniques to learn different languages. Use the intercultural aspect of methodology; There must be a clear choice of a foreign language, an analysis of the most effective methods of study, preparation of a clear study plan.	Check progress to justify the use of certain language learning strategies.
10	The ability to apply the methods of studying languages using computer	Practice computer-based tasks, use special software programmes for assignments, train pronunciation based on electronic and other media; Widen the use of the computer for the development of reading skills, listening; Train oneself in spelling, participating in performing tasks which can be inspected.	Test computer-based tasks.
20	The ability to use the target language in practical situations.	Apply methods of teaching professionally-oriented language based on the situational approach; Practice training in a practical situation or in practice-project situation; Use the target language in everyday life situations; Enrich the vocabulary, and use it in different life circumstances.	Examine the level of language learners, offering them to use the proposed practical situation in dialogue, monologue and polylogic speech.

28	The ability for self-evaluation in the study of languages	When proposing to study a foreign language, assess the performance of tasks to develop the skills of listening, writing, reading, based on comparisons with the correct answers, using the comparative method; Practice the use of original texts, comparing one's own products with the level of native speakers or writers; Use measuring techniques to evaluate the performance of tests.	Use comparative techniques in assessing the ability to learn the language of self-evaluation.

Implementation of a competence-based and student-centred approach involves a shift from teaching to learning, which requires increasing the role of *independent study*. Students' independent study is implemented in the form of preparation for classroom work and participation in it, workshops (discussion of academic issues, reports, reviews and discussion, participation in business games and discussions).

Approaches to evaluation: Evaluation of students' educational achievements is based on current assessment (checks on students' independent study), interim assessment (tests, colloquia, graded tests, examinations) and final examination (final state examination, defense/discussion of a thesis).

Evaluation methods: written and oral exams, reports on scientific research, oral and written presentations, expert evaluations, tests, portfolios, business games, final examination, defense/discussion of a thesis. Current assessment of students' performance and mid-term attestation is based on the 100% Grading Scale of evaluation of students' educational and extra-curricular achievements.

In the framework of academic programme every university establishes a fund of evaluation tools for current monitoring and mid-term assessment, which includes review questions and practical exercises, laboratory tests, colloquia, graded tests and examinations, tests and computer-based testing programmes, topics of term papers, essays. Evaluation of students' performance is also based on the external evaluation of educational achievements by an independent organization for quality assurance in education of the country.

Final state examination is required for each university graduate and includes the final interdisciplinary examination and defense of a thesis. The final state examination procedure includes certification of general, subject and specific competencies which were acquired by graduates. Final state examination results in awarding qualification (academic degree).

8. Cycle Level Descriptors (with reference to Qualifications Frameworks) in terms of Learning Outcomes

The **Bachelor** should:

be aware of:

- education as a common human value;
- language as a specific social phenomenon;
- the language system of a foreign language as a historically holistic education system;
- relationship of language and culture;
- communicative nature of language;
- the role of a foreign language in the modern multicultural world;

know:

- the specifics of communication as a particular kind of activity;
- the essence of the concept "intercultural communication" and its main types;
- cross-cultural, cultural and linguistic-cultural information about the country of the studied language;
- spelling, pronouncing/pronounciation, lexical, grammatical and stylistic norms of the studied languages;
- socio-cultural norms of behavior accepted in the country of the studied language;
- inventory of linguistic resources and rules for operating them;
- paralinguistic and extra-linguistic elements in terms of interaction and mutual enrichment of languages;

be able to:

- communicate both orally and through the written word;
- use language tools for applying communicative intention in accordance with the spheres and communication situations with regard to the components of the situation (subject, social status of partners, place, time, and others);
- understand utterance in meaningful semantic units;
- plan one's speech behavior and transmit information in a coherent, logically reasoned utterances;
- construct her/his verbal and nonverbal behavior in accordance with linguistic-cultural and socio-cultural specifics of the studied language country;
- use different types of discourse;
- control over one's speech acts and deeds of speech communication partners;
- use various strategies for reading/comprehension authentic texts;
- learn and stay up-to-date with learning the target languages;
- recogniseand solve linguistic problems;
- contrast, compare, identify cultural similarities and differences, classify, group, anticipate, etc.;
- to represent one's country and culture in the context of foreign language intercultural communication;

to have skills:

- to use properly linguistic data in all kinds and types of communicative activities;
- to use bibliographic and reference materials;

- to use e-learning tools: electronic textbooks, electronic dictionaries, e- mail and others;
- to work independently on mastering foreign languages;
- to use linguistic and contextual guess;
- to follow verbal and behavioral etiquette in accordance with the standards adopted in the countries of studied languages;
- to use techniques of self-control and proficiency level self-evaluation.

Core competences:
Forming: to have knowledge in the field of educational objectives, abilities and skills of the design and implementation of a holistic educational process.
Systematizing: systematization of psycho-pedagogical knowledge, to be able to systematic thinking and holistic perception of pedagogical activity;
Research: to implement a comprehensive monitoring based on psychological and pedagogical diagnostics, analysis and synthesis, to be able to pedagogical reflection, to strive for continuous improvement of research culture;

Graduates at Master level are expected to:
- apply knowledge, understand and be able to solve problems in new or unusual situations at all levels of language use;
- demonstrate advanced knowledge of methods of language learning and recent scientific discoveries in linguistics and methodology of language teaching and learning.
- write and defend master's thesis on the specialty and major (Linguistics and Intercultural Communication, Translation and Translation Studies, Philology, Methodology of native and foreign language teaching)

The **Master** should:
be aware of:
- the methodology of scientific knowledge;
- principles and structure of scientific activity organization;
- the subject area at an advanced level, i.e. to master up to date research methods and technology, to know the most recent theories and their interpretations;
- methods of critical monitoring, analysis and development of theory and practice;

be able to:
- apply knowledge for the original development and implementation of ideas in the context of scientific research;
- critically analyze concepts, theories and approaches to the analysis of processes and phenomena;
- integrate the knowledge gained in the framework of different disciplines to solve research problems in new and unfamiliar circumstances.

Graduates at PhD level are expected to:
- be able to develop, propose and promote recommendations for solving problems in linguistics and language learning;
- be able to analyze and put forward one’s own ideas on the methodology of studying or intralingual scientific and methodological problems;
- write and defend PhD thesis in the field.

The **holder of a PhD** should:

be aware of:

- up to date trends, tendencies and regularities of development of national or regional science in the context of globalization and internationalization;
- the methodology of scientific knowledge;
- achievements of world and national, regional science in the relevant field;

be able to:

- assess critically and design academic programmes;
- solve urgent (critical) scientific problems;
- develop and implement innovative technologies in the process of scientific research;
- implement the results of scientific research in the educational process;
- plan, develop, implement and adjust a compound process of scientific research;
- contribute own original research in expanding the boundaries of scientific areas that might be published at a national or international level.

9. Conclusions

The reference points developed in the Language Subject Area are recommended and may be taken into account when designing academic programmes in this or a related subject area.

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LAW

1. Introduction

The "Law" (or Jurisprudence) Subject Area has been developed in Tuning in several other countries and macro-regions (Russia, Europe, Latin America). The Tuning approach allows us to develop and implement, evaluate and improve first, second, and third cycle academic programmes.

Tuning aims to develop the structure of the educational programmes and ways of ensuring and enhancing the formation of general and subject specific competences in the area of “Law”. In Kazakhstan, the transition to a three-tier system (Bachelor-Master-Doctor) has been implemented; the freedom of universities to determine how their courses will be organized and the proportion of electives compared to compulsory disciplinary components is increasing; teaching methods are improving. In Tajikistan, Uzbekistan and Kyrgyzstan the reform of postgraduate education has started: now a second level of training, the Master’s degree, has been introduced. In Uzbekistan, since 2012 a three cycle system of training (Bachelor-Master-Doctor) has been implemented.

In Turkmenistan, the Law "On Education", passed in May 2013, provided for a two-tier education system that comprises the Bachelor and the Master’s degrees, in accordance with a part of the Bologna Process. At the same time, the old system of training. which required 5 years of study to receive a specialised postgraduate and doctoral award, continues to operate. The transition to two-tier education in Turkmenistan is planned in stages.

The development of our TuCAHEA recommendations is needed to determine common approaches to the development of specialties of the area "Law" in the countries of Central Asia. Development of comparable competences, objectives, goals, skills in teaching Jurisprudence will allow to increase the competitiveness of graduates of the subject area and facilitate their finding employment. It will also facilitate the mutual recognition of diplomas, the unification of the learning outcomes, and the approximation of legislation and law enforcement.

In all countries of Central Asia law disciplines are also taught in other programmes by law teachers. For example, in economics programmes lawyers teach such disciplines as: Tax Law, Budget Law, Business Law; in Journalism programmes, they teach the legal regulations of the media. In addition, for all non-law Bachelor programmes the discipline "Basics of Law" is mandatory. This discipline aims at forming basic knowledge of the law, the state, the political system, and the main branches of national law.

2. Description of the subject area

The "Law" (Jurisprudence) Subject Area aims to study the regulatory and legal adjustment of social relations, the intersection of the state and legal development of society and the development of provisions aimed at improving the legal

requirements and practical implementation of legislation by the subjects of legal relations.

- **In the Republic of Kazakhstan**, the area "Law" is subdivided into the following sub-areas: "Jurisprudence", "International Law", "Law Enforcement ", and "Customs Law".
- **In Uzbekistan** – the sub-areas are «Jurisprudence», «International Law», «Law Enforcement», and « Customs Law».
- **In Tajikistan** – they are «Jurisprudence», «International Law», «Commercial Law», «Financial law», and «Law Enforcement».
- **In Kyrgyzstan** – they are «Jurisprudence», and «International Law».
- **In Turkmenistan** they are "Law", "International Law", "Public International Law", and "Private International Law".

The various sub-areas of the general subject of "Law" occupy an important place in the educational environment. The study of the various disciplines of the specialty is aimed at elucidating the legal rules and their practical application. Within this framework, a lawyer studies the legal systems of other countries. The aim of studying Law is to be able to use and apply the legal norms properly in future professional activities.

Jurisprudence is the science of law and the state, one of the most important social sciences. Jurisprudence studies the Law as a special system of social norms, legal forms of organization and activities of the state, as well as other structural elements of the political system of society. Jurisprudence is divided into a number of branches, including theory of the state and law. These are: regulatory sciences (civil, administrative, criminal, family, business, financial, banking, environmental law), applied sciences (criminology, forensic medicine, forensic psychiatry, ethics, legal statistics, etc.), theoretical sciences (theory of the state and law, history of political and legal doctrines, the history of state and law, etc.).

3. Degrees typically offered at the three cycle levels

1. Bachelor

In the **Republic of Kazakhstan** the Law area is subdivided into the following curricula: Jurisprudence, International Law, Law Enforcement, Customs Law.
In **Uzbekistan:** Jurisprudence, International Law, Law Enforcement, Customs Law.
In **Tajikistan:**Jurisprudence, International Law, Commercial Law, Financial law, Law Enforcement.
In **Kyrgyzstan:** Jurisprudence, International Law.
In **Turkmenistan:** Jurisprudence, International Law

2. Master

In the Republic of **Kazakhstan** and the Republic of **Kyrgyzstan** Master programmes are divided into two areas:

- Profile area, leading to the academic degree "Master of Law".
- Scientific and pedagogical area, giving the academic degree "Master of Jurisprudence".

In **Uzbekistan** the Master has a specific track or profile, which leads to the award of the academic degree "Master of Law".
In **Tajikistan**, the Master does not have a specific track or profile, but leads to the award of the academic degree "Master of Law".
In **Turkmenistan**, the new Master programmes are under development.

3. The Doctorate, as the third cycle (level) of educational programmes, is only available in **Kazakhstan**. Possible doctoral degrees are the following:

- Doctorate with the profile J.D. (LLD). This is an academic degree of Doctor of Law (LLD) in the specialisation 6D030100 - Jurisprudence.
- Doctor of Philosophy (PhD). This is an academic degree of Doctor of Philosophy (PhD) in the specialisation 6D030100 - Jurisprudence.

In **Kyrgyzstan, Uzbekistan, Tajikistan**, Doctoral studies, as the third cycle (level), is under development. In Uzbekistan the Doctor of Law (PhD) is awarded with the specification of the specific disciplinary area.
In **Turkmenistan**, there is a two-stage research phase in higher education programmes: postgraduate and doctoral studies.

4. Typical employment of graduates at the three cycle levels

1. Bachelor
In Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, Turkmenistan:

- The Bachelor's degree, awarded after 4 years (full-time) or 5 years (part-time) of higher education, typically leads to a professional career: in law enforcement; in judicial, executive and representative bodies of state power and administration; with public and private enterprises, legal, banking, insurance and accounting firms, and educational organizations.

2. Master
In Kazakhstan (full-time):

- Profile areas (administrative and managerial, expert and advisory, legal, organizational and administrative activities): graduates can work in law enforcement, judiciary, justice, government, commercial and non-commercial organizations. This entails one year of training.
- Scientific and pedagogical area (educational, research, methodological, administrative and managerial, organizational and administrative activities): graduates can work in the field of education; engage in research , methodical work, engage in other professional activities. This entails 2 years of training.

In Kyrgyzstan: there is full-time and part-time higher education, corresponding to 1 or 2 years of training.
In Uzbekistan: there are only full-time programmes.
In Tajikistan: there is full-time and part-time education, corresponding to 2 years of training.
In these countries, the separation of Master in specific profile areas is under development.
In Turkmenistan, Master's level education is under development.

In general, in all countries of Central Asia those holding Master's degrees can work in law enforcement, the judiciary, justice agencies, other state bodies, as well as commercial and non-commercial organizations in the sphere of education; they may also engage in research or methodological work. Thus employment may be in administrative and managerial, expert and advisory, legal, organizational and administrative, educational, research.

3. Doctor

The doctoral degree as a third cycle (level) educational programme has only been implemented in Kazakhstan. There are two types, as mentioned under point 3:

- Doctoral degree with a J.D. (LLD) profile, which prepares for administrative and analytical work. Graduates can work in public administration, justice and law enforcement activities, or in judiciary, foreign affairs, commercial and non-commercial enterprises. It requires 3 years of training.
- Doctor of Philosophy (PhD) which leads to educational, scientific, methodological activities. Graduates can work in government, law enforcement, justice, judiciary, foreign affairs, commercial and non-commercial enterprises, carry out educational, research and methodological activities. It requires 3 years of training.

In other countries implementation of third cycle degrees is foreseen or in progress.

5. The most relevant competences for the Subject Area

Based on a consultation with teachers, employers, students and graduates, and also as a result of discussions in the working group, 10 general competences and 12 subject competences have been identified as having the greatest importance for all respondents.

To order to carry out the consultation and to select the most relevant generic competences, availing ourselves of the opinions of four stakeholder groups (teachers; employers; students; graduates) 30 general competences agreed upon by all Subject Area Groups were offered. These were:

1. Ability to analyse and synthesize
2. Ability to use logic and critical thinking for solving problems
3. Ability to model, design and forecast
4. Ability to carry out research applying appropriate methods
5. Ability to take initiatives and entrepreneurship
6. Ability to innovate
7. Ability to develop general knowledge
8. Ability to learn, including autonomous learning
9. Ability to communicate interactively and receive feedback
10. Knowledge of the professional field
11. Ability to communicate in a multicultural context
12. Ability to communicate in the official state, Russian and foreign languages
13. Ability to lead people and work in a team
14. Ability to manage information
15. Ability to use information and communication technologies
16. Social responsibility

17. Ability to follow a healthy lifestyle
18. Ecological and environmental responsibility
19. Knowledge of the laws
20. Ability to prevent and resolve conflicts
21. Patriotism and preservation of own cultural values
22. Tolerance and respect for others
23. Commitment to quality results
24. Flexibility
25. Ability to apply knowledge in practice
26. Orientation towards the needs of users
27. Ability to work autonomously
28. Ability to adapt to change
29. Ability to make decisions
30. Time-management

In the consultation the respondents were asked to rate the general and the subject specific competences from 1 to 4 as to degree of importance and 1 to 4 as to level of achievement. Furthermore there was a ranking exercise in which the respondents were asked to choose the 5 most important competences in their view. The very low correlations show that the respondents' ideas were quite varied:

CORRELATIONS AMONG GROUPS
(Law respondents)

IMPORTANCE

	Academics	*Employers*	*Students*	*Graduates*
Academics	1,0000			
Employers	0,3971	1,0000		
Students	0,5324	0,3779	1,0000	
Graduates	0,5307	0,3355	0,3499	1,0000

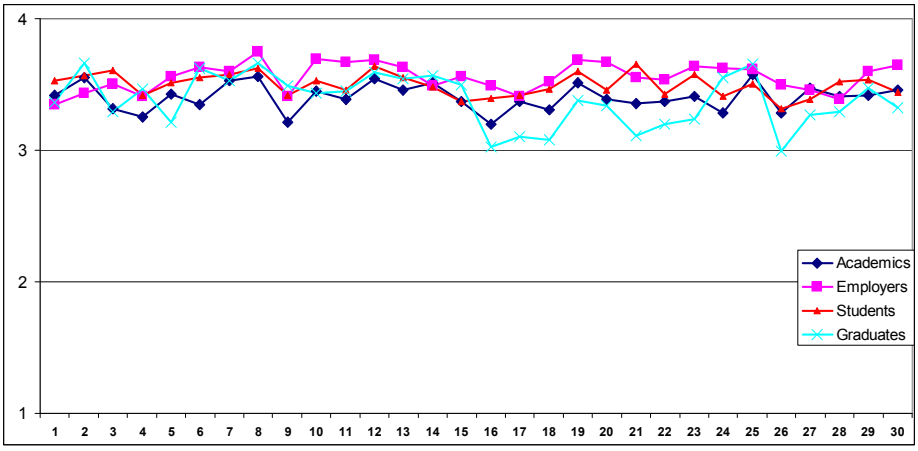
ACHIEVEMENT

	Academics	*Employers*	*Students*	*Graduates*
Academics	1,0000			
Employers	-0,2635	1,0000		
Students	-0,0856	0,1953	1,0000	
Graduates	0,4078	-0,0086	0,0265	1,0000

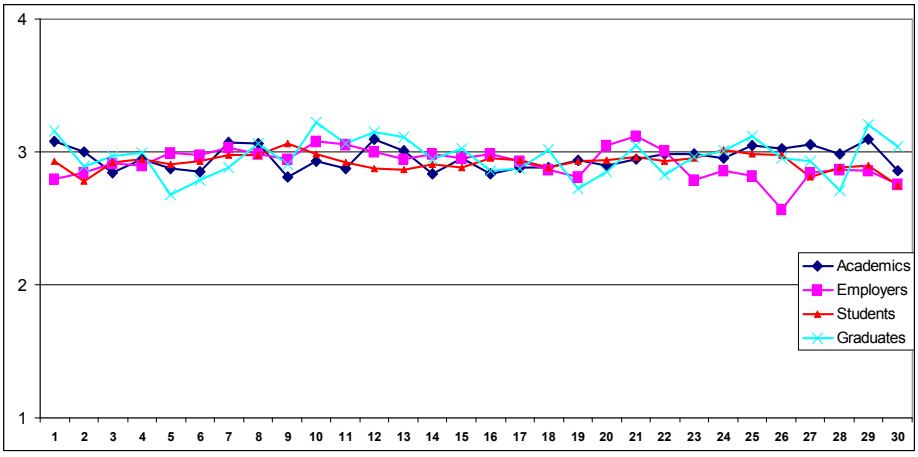
RANKING

	Academics	*Employers*	*Students*	*Graduates*
Academics	1,0000			
Employers	0,5424	1,0000		
Students	0,6158	0,4825	1,0000	
Graduates	0,3940	0,3532	0,3812	1,0000

IMPORTANCE (Ratings)



ACHIEVEMENT (Ratings)



After careful analysis of the results deriving from by consulting these four categories of interested persons, as well as the considered opinion of the working group, the following were identified as the most important general competences in the "Law" Subject Area:

Key General competences(GC)

1. Ability to apply knowledge in practice (GC 25)
2. Ability to learn, including autonomous learning (GC8)
3. Ability to use logic and critical thinking for solving problems (GC2)
4. Ability to communicate in the official, state, Russian and foreign languages (GC12)
5. Ability to develop general knowledge (GC 7)

6. Knowledge of the professional field (GC10)
7. Ability to prevent and resolve conflicts (GC20)
8. Patriotism and preservation of own cultural values (GC21)
9. Ability to model, design and forecast (GC3)
10. Ability to innovate (GC6)

To select the most relevant subject specific competences for the four stakeholder groups, the following twenty competences were offered:

1. Knowledge of current norms, statutes, regulations and other sources of law.
2. Knowledge of and ability to use correctly the hierarchy of legal sources.
3. Knowledge of major international treaties.
4. Capacity to apply a legal rule to a particular legal case.
5. Precise understanding of pre-trial and court-room procedure in lawsuits
6. Understanding of criminal, administrative, disciplinary, and civil-legal procedures.
7. Ability to stipulate a contract and explain it legally and fully
8. Skills to draw up legal documents.
9. Ability to understand professionally and explain legal norms in the process of their application.
10. Ability to produce effective written or oral legal decisions and advice.
11. Capacity to determine whether a legal conflict can be solved.
12. Capacity to identify the legal interests of the parties.
13. Knowledge of and ability to apply national and international instruments to protect and promote human rights.
14. Capacity to use necessary technology for information searches in juridical practice.
15. Capacity to understand the philosophical and theoretical foundations of the law and State, and to link them to their practical application.
16. Knowledge of and ability to apply the basic means of identification of criminals and anti-crime techniques.
17. Ability to analyse the juridical problems that may constitute an obstacle to Law enforcement.
18. Capacity to use alternative means of resolving conflicts and disputes (Mediation).
19. Knowledge of and ability to apply the law in the sphere of gender equality and Juvenile justice.
20. Knowledge of political and legal fundamentals of the theory of civil society and the rule of law.

CORRELATIONS AMONG GROUPS

Law Respondents

IMPORTANCE

	Academics	*Employers*	*Students*	*Graduates*
Academics	1,0000			
Employers	0,4443	1,0000		
Students	0,6575	0,1811	1,0000	
Graduates	0,4982	0,4459	0,2733	1,0000

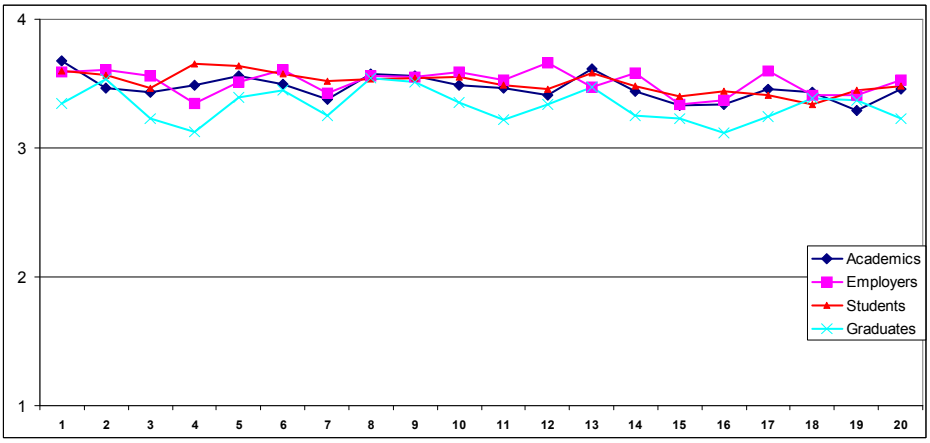
ACHIEVEMENT

	Academics	*Employers*	*Students*	*Graduates*
Academics	1,0000			
Employers	0,1553	1,0000		
Students	0,6035	0,2670	1,0000	
Graduates	-0,2494	-0,0859	0,0917	1,0000

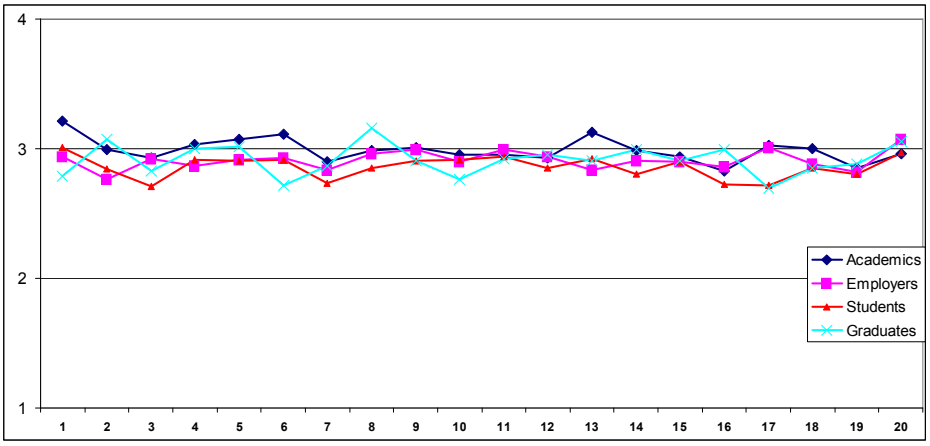
RANKING

	Academics	*Employers*	*Students*	*Graduates*
Academics	1,0000			
Employers	0,6567	1,0000		
Students	0,8843	0,6903	1,0000	
Graduates	0,5800	0,4064	0,5850	1,0000

IMPORTANCE (Rating)



ACHIEVEMENT (Rating)



Again, on the basis of the results of the consultation with the four categories of stakeholders, as well as the opinions of the working group, the following were identified as the most important subject specific competences in the "Law" Subject Area:

Key Subject Specific competences

1. Knowledge of current norms, statutes, regulations and other sources of law (SC1).
2. Knowledge of and ability to apply national and international instruments to protect and promote human rights (SC13).
3. Skills to draw up legal documents (SC8).
4. Precise understanding of pre-trial and court-room procedure in lawsuits (SC5).
5. Ability to understand professionally and explain the legal norms in the process of their application (SC9).
6. Capacity to identify the legal interests of the parties (SC12).
7. Understanding of criminal, administrative, disciplinary, and civil-legal procedures (SC6).
8. Knowledge of and ability to use correctly the hierarchy of legal sources (SC2).
9. Ability to analyse the juridical problems that may constitute an obstacle to Law enforcement (SC17).
10. Ability to produce effective written or oral legal decisions and advice (SC10).
11. Capacity to apply a legal rule to a particular legal case (SC4).
12. Capacity to determine whether a legal conflict can be solved (SC11).

6. Cycle level descriptors (with reference to Qualifications Frameworks) in terms of competences

Basic level descriptors (descriptors that define the essence of the subject areas as the results of education of a lawyer):

1. To demonstrate the knowledge of national and international law.
2. To be able to explain the legal norms.
3. To be able to conform to, execute, use and implement law in practice.

Basic competences (competences defining the essence of subject areas):

1. To know the sources of national law.
2. To understand and explain the meaning and content of legal norms.
3. To be able to implement legal provisions in practice.

The principle of division into cycles (levels) of education

The first cycle (level) of education, the Bachelor degree, implies preparation for practical applications of the educational programme.

The second cycle (level) of education, the Master's degree, enables to graduate not only to engage in higher levels of practical applications, but also to undertake employment in pedagogical and scientific activities

The third cycle (level) of education, the Doctorate, may prepare for practical activities of a high level, as well preparing scientific and pedagogical staff.

6.1. First cycle (Bachelor) of education – Subject specific competence

In the subject specific competences the following categories are reflected: knowledge, skills, and degree of autonomy or responsibility.

1. To know the basic operating regulatory and legal acts and basic legal sources of law.
2. To know and use as necessary for the specific case national and international acts aimed at protecting and promoting fundamental human rights.
3. To have skills in drafting legal documents specific to a particular subject of future work.
4. To have a clear view of the procedural actions in the pre-judicial and judicial proceedings in the implementation of the specific legal case.
5. To have the ability to understand and explain the professional legal standards in the implementation of specific legal norms.
6. To be able to determine the legal interests of the parties in order to protect the rights of individuals and legal entities.
7. To understand the criminal procedural, administrative and procedural, disciplinary, civil procedures in the framework of one's official duties.
8. To be able to orientate a specific legal case within the normative hierarchy in order to make an appropriate decision.
9. To be able to analyse legal problems in the fulfilment of their rights and responsibilities in implementing the law.
10. To be able to give qualified oral and written legal opinions and advice in specific cases for individuals and legal entities.
11. To be able to apply specific sectoral legal standard to a particular legal casus (case).
12. To be able to find appropriate solutions for legal conflicts between individuals and legal entities.

6.2. Second cycle (Master) – Subject specific competences

1. To know the current and other regulatory and legal acts having historical and legal significance, the basic sources of law in the modern period, and other historical periods and their development trends
2. To know and use necessary for the specific case national and international acts, aimed at protecting and promoting fundamental human rights, and be able to generalize these skills.
3. To have skills in drafting legal documents with professional, educational and scientific orientation.
4. To have a clear view of the procedural actions in the prejudicial and judicial proceedings in the implementation of the specific legal case and be able to predict the development of a scientific legal case.
5. To have the ability to understand and explain the professional legal standards in the implementation of specific legal norms in training sessions, and scientific activities.
6. To be able to determine the legal interests of the parties, to protect the rights of individuals, legal entities at the state level, and the subjects of the political system.

7. To understand criminal, administrative, disciplinary, and civil procedures in the framework of their official duties, as well as in the process of research and teaching.
8. To have the ability to orientate oneself in the hierarchy of legal sources in order to make a decision on a specific legal case, as well as for scientific research.
9. To have the ability to analyse legal problems in the fulfilment of their rights and responsibilities in implementing the law, and also consider the legal challenges in the development of the modern state and rule of law.
10. To be able to give oral and written qualified legal opinions and advice in specific cases for individuals and legal entities, as well as clarify political and legal acts.
11. To be able to apply specific sectoral legal standards to a particular legal casus (case), and to generalize the results of legal practice.
12. To have the ability to determine how to solve legal conflict between natural and legal persons, state and public interests.

6.3. Third cycle (Aspirantura, Doctor) – Subject specific competences

1. To know the current and other regulatory and legal acts having historical and legal significance, the basic sources of law in the modern period, and other historical periods as well as the trends of development of scientific and theoretical level.
2. To know and use national and international acts required for the case in question, and then to be able to generalize those skills and knowledge, and therefore understand the reasons for their occurrence and the tendencies of their development.
3. To have skills in drafting of documents of legal character, in professional, educational and scientific contexts, using scientific methodology.
4. To have a clear view of the proceedings and procedures of pre-trial actions and court proceedings in the implementation of the specific legal case, and be able to predict the development of scientific and legal relationship to develop scientifically valid proposals for their improvement .
5. To have the ability to understand and explain the professional legal standards in the implementation of specific legal norms in the process of training sessions and scientific activities, to generalize the results of scientific knowledge.
6. To be able to determine the legal interests of the parties to protect the rights of individuals and entities at the state level and the subjects of the political system of society, to develop science-based ways of implementing the legal interests of all legal relations.
7. To understand the criminal, administrative, disciplinary, and civil procedures in the process of research and teaching at the level of development of didactic tasks and procedural relations.
8. To have the ability to navigate the hierarchy and subordination of legal acts with a view to deciding on the specific legal case , as well as comprehend the modern legal hierarchy in the process of research on scientific and theoretical level.

9. To have the ability to analyse legal problems, ensuring the fulfilment of rights and responsibilities in implementing the law, and to consider them in the development of modern law and state, and to be able to monitor and interpret the development of legal theory and practice.
10. To be able to give oral and written legal opinions and qualified advice on specific casus for individuals and legal entities, to explain the political and legal acts to formulate abstract criteria in the evaluation of legal phenomena.
11. To be able to apply specific sectoral legal standards to a particular legal case, to generalize the results of legal practice, to identify new patterns of development.
12. To have the ability to determine the solution for legal conflicts between natural and legal persons, state and public interests, to analyse critically modern state-legal theory and practice, and its trends of development.

	Competences		
Level	**Knowledge**	**Skills**	**Level of autonomy and responsibility**
Level 1 BA	1. To know the basic operating regulatory and legal acts and legal sources of law. 2.To know the national and international acts, necessary for the specific case, with regard to protecting and promoting fundamental human rights. 4. To have a clear view of the procedural actions in the prejudicial and judicial proceedings in the implementation of the specific legal case. 7. To understand the criminal procedural, administrative and procedural, disciplinary, civil procedures in the	2. To use national and international acts aimed at protecting and promoting fundamental human rights necessary for the specific case. 3. To have skills in drafting legal documents specific to a particular subject of future work. 5. To have the ability to understand and explain the professional legal standards in the implementation of specific legal norms. 8. To have the ability to orientate oneself in the hierarchy and subordination of normative legal with the aim to make a decision on a specific legal case. 10. To be able to give qualified oral and written legal opinion	6. To be able to determine the legal interests of the parties to protect the rights of individuals and legal entities. 9.To have the ability to analyse legal problems in the fulfilment of rights and responsibilities in implementing the law. 11. To be able to apply specific sectoral legal standards to a particular legal case. 12. To have the ability to determine how legal conflict between individuals and legal entities can be solved.

	framework of their official duties.	and advice in specific cases for individuals and legal entities.	
Level 2 MA	1. To know the current and other regulatory and legal acts having historical and legal significance, the basic sources of law in the modern period, and other historical periods and their development trends 2. To know national and international acts, aimed at protecting and promoting fundamental human rights, necessary for the specific case and be able to generalize these skills. 4. To have a clear view of the procedural actions in the prejudicial and judicial proceedings in the implementation of a specific legal case and be able to predict the development of legal relationships 5. To have the ability to understand the professional legal standards in the implementation of specific legal norms in the process of training sessions	2. To use national and international acts, aimed at protecting and promoting fundamental human rights necessary for the specific case, and be able to generalize these skills. 3. To have skills in drafting legal documents, legal professional, educational and scientific orientation. 5. To have the ability to explain the professional legal standards in the implementation of specific legal norms in the process of training sessions and scientific activities. 7. To understand the criminal procedural, administrative and procedural, disciplinary, and civil procedures in the framework of their official duties, as well as in the process of research and teaching. 10. To be able to give qualified oral and written legal opinions and advice in specific cases for individuals and legal entities, as well as clarify political and legal acts.	4.To be able to predict the development of a legal case scientifically. 5. To have the ability to interpret the professional legal standards in the implementation of specific legal norms in the process of training sessions and scientific activities. 6. To be able to determine the legal interests of the parties to protect the rights of individuals and legal entities at the state level, and the subjects of the political system. 8. To have the ability to orientate oneself in the hierarchy and subordination of normative legal with the aim to make a decision on a specific legal case, as well as for scientific research. 9. To have the ability to analyse legal problems in the fulfilment of their rights and responsibilities in implementing the law, and also consider the legal challenges in the development of modern law and state. 11. To be able to apply specific sectoral legal standards to a particular legal casus, and to generalize the results of legal practice. 12. To have the ability to determine the solutions for the legal conflict between natural and legal persons,

	and scientific activities.		state and public interests.
Level 3 Dr	1. To know the current and other regulatory and legal acts having historical and legal significance, the basic sources of law in the modern period and other historical periods as well as the trends of development at the scientific and theoretical level. 2. To know what national and international acts are the obligatory for specific case, and also to be able to generalize these skills and knowledge of scientific bases of law and to know the reasons of its occurrence and tendencies of its development. 5. To have the ability to understand the professional legal standards in the implementation of specific legal norms in the process of training sessions and scientific activities, to generalize the results of scientific knowledge. 7. To understand the criminal,	2. To use national and international acts obligatory for the specific case, and also generalize these skills and knowledge of the scientific basis, to know the reasons of its occurrence and tendencies of its development. 3. To have skills in drafting of documents of a legal character, according to the different paths, professional, educational and scientific, using scientific methodology. 5. To have the ability to explain the professional legal standards in the implementation of specific legal norms in the process of training sessions and scientific activities, and to generalize the results of scientific knowledge. 10. To be able to give oral and written legal opinions and qualified advice on specific cases for individuals and legal entities. 11. To be able to apply specific sectoral legal standards to a particular legal case.	4. To have a clear view of the proceedings of pre-trial actions and court proceedings in the implementation of the specific legal case and be able to predict the development of scientific and legal outcomes to develop scientifically valid proposals for their improvement. 5. To have the ability to interpret the professional legal standards in the implementation of specific legal norms in the process of training sessions and scientific activities, and to generalize the results of scientific knowledge. 6. To be able to determine the legal interests of the parties to protect the rights of individuals and entities at the state level and the subjects of the political system, to develop science-based ways of implementing the legal interests of all parties. 8. To have the ability to navigate the hierarchy and subordination of legal acts with a view to deciding on the specific legal case. 9. To have the ability to analyse legal problems in the fulfilment of their rights and responsibilities in implementing the law, and to consider them in the development of modern law and state, and to monitor

	administrative , disciplinary and civil procedures in the process of research and teaching at the level of development of didactic tasks, subjects and procedural relations. 8. To comprehend modern legal hierarchy in the process of research on scientific and theoretical level.		and interpret the development of legal theory and practice. 10. To explain the political and legal acts to formulate abstract criteria in the evaluation of legal phenomena. 11. To generalize the results of legal practice, to identify new patterns of development. 12. To have the ability to determine the solution of the legal conflict between natural and legal persons, state and public interests , to critically analyse modern state-legal theory and practice, and its development trends.

7. Approaches to learning, teaching and assessment

Competences are the knowledge and skills obtained through the learning process and the ability to implement them in their professional field. They also include mindset, values and attitude.

In all countries, in all the universities, of Central Asia comparable teaching and assessment methods are used: This includes lectures, seminars using multimedia tools, students' independent work under the guidance of a teacher, and students' independent work using innovative educational technologies. In the learning process multimedia presentations, business games, quizzes, colloquia, thematic competitions, essay writing, research papers and reports on student competitions and conferences are used. The assessment system in these countries is based on testing, analysis of written works, evaluation of oral responses and presentations of students and other forms of assessment of student learning.

For example, in the Academician E.A.Buketova Karaganda State University (Kazakhstan) during lectures students, under the guidance of the lecturer, carry out an analysis and synthesis of the problematic aspects of the topic on the basis of students' knowledge obtained during the self-study using the Scholastic Method (constant questioning with arguments made for and against propositions), electronic lectures and multimedia presentations reveal the major issues of the topic. This technique allows conducting classes in an interactive mode, which distinguishes modern lectures from lectures held in the past.

7.2. Formation of subject competences with regard to their relevance, teaching and learning methods for implementation of competences

General and special competences are implemented during training sessions as well as during independent study. Through the study of normative legal acts contained in textbooks and manuals, and methodological literature, students acquire knowledge and skills related to general and specific competences. Students develop practical skills in practical classes, which are held in the form of case studies, business games, model training courts, students develop practical skills in the implementation of legal advice in legal clinics, as well as through student academic mobility. During training, competence implemented by passing educational evaluation, production and pre-diploma practice.

Examples of Subject specific and general competences:

Subject specific competence - 1(SC1):

«Knowledge of current norms, statutes, regulations and other sources of law»

This competence is formed through the theoretical study of the texts of legal acts for the purpose of clarifying for themselves and for others the explanation and application of its content. This is done by listening to lectures, self-study for seminars during which knowledge of the basic provisions of the laws is fixed, in the process of self-training, with the aim of strengthening and generalizing such knowledge. Assessment of the development of this competence is carried out by computer-based testing, evaluation of oral replies in seminars, assessment of written work, performance appraisals, assessment of educational training activities.

Subject competence - 2 (SC13):

"Knowledge of and ability to apply national and international instruments to protect and promote human rights"

This competence is formed by analysing national and international regulations relating to the protection and promotion of human rights, in order to identify their close relationship and interaction. This is done by examining the main provisions of legal acts in the process of self-training in order to consolidate and summarize knowledge. The development of this competence is assessed by computer-based testing, evaluation of the oral replies in seminars, assessment of written work, performance appraisals, educational juridical training.

Subject competence - 5 (SC9):

"Ability to understand professionally and explain the legal norms in the process of their application"

This competence is formed by defining specific terms of the law to be applied, followed by a qualified interpretation of the law. The development of this competence is assessed through problem based lectures, thematic business games, in the process of implementation of legal advice through legal clinics, as well as during educational juridical training.

Subject competence - 6 (SC12):
"Capacity to identify the legal interests of the parties"
This competence is formed by identifying and analysing the requests depending on the nature of the goals, interests and expectations of the parties. This is done by mapping the interests and needs of the parties, and selecting specific tools, methods and techniques of communication. The development of this competence is assessed on the basis of the oral replies in seminars, evaluations and passing any practical experience undertaken (including work based learning, internships, case studies).

Subject competence - 7 (SC6):
"Understanding of criminal, administrative, disciplinary, and civil-legal procedures".
This competence is developed through the theoretical study of criminal procedure, administrative procedure, labour law, civil procedure, and the order of its implementation, with a view to imparting practical skills related both to legal norms and to specific situations in the field, including investigation, examination and resolution of various categories of criminal offenses, as well as administrative, civil, and disciplinary cases. It can be formed by listening to lectures, independent work on the sources of law, independent preparation for seminars, decisions of juridical cases, during which knowledge of the basic provisions of the stages of civil litigation, criminal proceedings, administrative proceedings, and proceedings in cases of misconduct is fixed.
The development of this competence is assessed through computer-based testing, evaluation of the oral replies in seminars, evaluations, and passing any practical experience undertaken (including work based learning, internships, case studies).

Subject competence - 8 (SC2):
"Knowledge of and ability to use correctly the hierarchy of legal sources"
Realized through the theoretical study of the classification of regulations and the need for a clear understanding of the hierarchy and the consequences of failing to adhere to superior sources, with a view to acquisition and development of practical skills to enable confident navigation of the system and to take the right decisions.
This is done by listening to lectures, self-study for seminars, during which the level of knowledge of legal acts is fixed, with a view to deciding on a specific legal case.
The results of the development of this competence is determined by computer-based testing, evaluation of the oral replies in seminars, assessment of written work.

Subject competence - 9 (SC17):
"Ability to analyse the juridical problems that may constitute an obstacle to Law enforcement"
Realized by studying the text of legislation, analysing its content, working with legal documents of various kinds, aimed at promoting the generation of theoretical and practical recommendations for the use and improvement of the legislation.
Carried out during practical training, in the consultation process in the legal clinic, independent work (study, analysis, interpretation) to identify gaps in the current

legislative norms, which is formed through the practical experience leading to the ability to analyse critically instruments and interpret current legislation.
The development of the competence is determined by assessing the oral replies in seminars, assessment of written work, including essays on the proposed topics, evaluation of practical training periods.

Subject competence - 10 (SC10):
"Ability to produce effective written or oral legal decisions and advice"
Acheived by examining the content of the legislative act, the collection and analysis of normative and factual information in order to consolidate the material, developing practical skills make an informed decision, drafting of legal documents for qualified legal assistance to citizens and legal entities.
Carried out by listening to lectures, self-study for seminars, during which knowledge of the basic provisions of the law is fixed, participation in the student legal clinic, work placement in the Bar Association or in the legal departments of enterprises and organizations, with a view to acquiring practical skills and the ability to identify rights and apply the law.
The results of this competence development are determined by computer-based testing, evaluation of the oral replies in seminars, assessment of written work, performance appraisals of work based learning.

Subject competence - 11 (SC4):
"Capacity to apply a legal rule to a particular legal case".
Implemented through a theoretical study of substantive and procedural law, to clarify the meaning of the study of the law as applicable, contained in the acts of application of the law and the generalization of judicial practice with the aim of imparting practical skills to use appropriate substantive and procedural legal norms to a specific incident. Carried out practical traineeship in law enforcement, in the Bar Association, during which the basic knowledge of areas of law is fixed and deepened, and skills application developed.
The results of development of competence determined by computer-based testing, evaluation of the oral replies in seminars, assessment of written work to address incidents, evaluation of any industrial practice undertaken.

Subject competence - 12 (SC11):
"Capacity to determine whether a legal conflict can be solved"
Formed by development of a certain theoretical common and special knowledge in the field of legal disputes, of practical skills of resolution of conflicts by using various legal procedures and alternative ways of resolving legal conflicts through search for compromise, and achievement of agreement on a controversial question between the parties. It is carried out by means of listening to lectures, independent preparation for seminar participation in the course of which knowledge of basic provisions of the law and sciences about conflictology is fixed, and in the course of independent preparation, for the purpose of fixing and generalizing knowledge.
Results of development of this competence are verified by means of computer testing, an assessment of oral answers during seminar attendance, evaluation of written works, an assessment of the results of passing educational training and getting juridical work experience.

General competence - 1 (GC25):
«Ability to apply knowledge in practice»
Formed in the course of passing practical work, for example: consultations in legal clinic, in various type of business games, “Olympic Games” dedicated to various subjects, scientific and practical students' conferences and other types of creative work aimed at the development of a practical approach to the realization of knowledge.

General competence - 2 (GC8):
“Ability to learn including autonomous learning”
Achieved through an educational process of knowledge acquisition, acquisition of skills, in the course of participation in “Olympic Games” organised on relevant subjects, in competitions of students’ research works, in scientific and practical conferences aimed at the development of intellectual, practical and creative abilities, personal and professional growth of future experts.

General competence – 3 (GC2):
“Ability to use logical and critical thinking for solving problems”
Formed in the course of attending and preparing seminars with the application of interactive methods of training (business games, work in small groups, brainstorming), in the course of passing the educational training and getting juridical work experience, the research abilities aimed at the development of logical and critical thinking of students for the solution of problems.

General competence 4 (GC12):
“Ability to communicate in official state, Russian and foreign languages”
It is formed in the educational process, in the course of training and carrying out juridical work experience, in the course of consultations in legal clinic, for improvement of skills of competent informal and written language on state, Russian and foreign languages, record keeping in a state language.

General competence 5 (GC7):
“Ability to develop general knowledge”
It is formed in the educational process, in the course oftraining and carrying out juridical work experience, in the course of consultations in legal clinic, writing of scientific works for development of creative abilities, ability to gather and process information with subsequent analysis and conclusions.

General competence 6 (GC10):
“Knowledge of the professional field”
It is formed in the course of study to acquire theoretical knowledge and practical skills in the field of law, possession of basic legal concepts, skills of understanding the legal text, ability to use normative legal documents in professional activity.

General competence *7 (GC20):*
«Ability to prevent and resolve conflicts»
It is formed by means of studying and practicing how to prevent the emergence of undesirable conflict situations taking into account rules of law and ethical rules with

an orientation towards achievement of possible agreement within a legal framework.

General competence 8 (GC21):
"Patriotism and preservation of own cultural values and respect for others"
It is formed in the course of formation of patriotic feelings and patriotic consciousness on the basis of work in groups, familiarizing with cultural and historical traditions. It is carried out by means of assimilation of cultural historical values, development of pride in the best traditions of the state, society and culture.

General competence 9 (GC3):
«Ability to model, design and forecast»
It is formed in the course of creation by the teacher of a special professional focused training environment which gives the chance, within a specific course, to organize interaction thus achieving the necessary result, i.e. training a competent, competitive expert .

General competence 10 (GC6):
«Ability to innovate»
It is formed by the introduction of new approaches to learning which can provide the development of the communicative, creative and professional abilities needed for self-education. This can be achieved by using innovative training materials, creation oftraining programmes, development of the complete concept of creation of educational programmes using multimedia,also training at university level in this area, formation of new tutorials.

7.3. Assessment of achievements of students' subject specific competences

When assessing students' progress in the formation of competences various 'ratings' are used: Mandatory (in written, oral and test form); Additional (in the form of round tables, role games, presentations, preparation of videos (educational films), holding of separate investigative activities, debates and disputes, etc.

For example, here are evaluation criteria for two subject specific competences:
Subject competence *- 7 (SC6):*
«Understanding of criminal, administrative, disciplinary, and civil-legal procedures»
To evaluate results the criteria used are:

- correct definition of an applicable law;
- ability to apply regulations, to understand norms of substantive and procedural law in professional activity;
- illustration of the main elements and characteristic features of criminal procedure, administrative and procedural, disciplinary, civil procedures;
- correct preparation of procedural documents in the sphere of civil, criminal, administrative and disciplinary proceedings;
- correct use of legal language.

Subject competence - *8 (SC2):*
«Knowledge of and ability to use correctly the hierarchy of legal sources»
To evaluate results the criteria used are:

- ability to define correctly the validity of regulations, to establish their connection with other acts, to identify changes, conflicts etc.
- ability to navigate correctly in the current legislation, to find necessary regulations and to put them into practice;
- ability to define the position of the regulatory legal rule depending on its importance in the hierarchy of legal rules;
- ability to distinguish correctly the main and derivative types of standard legal acts.

7.4. The most relevant competences for the first, second, third level of education

All competences defined above under point 5 are important and are formed at all three levels of training: naturally at increasing depth and while gaining the ability to use each competence in practice and understand it scientifically.

For example, the first subject competence:
1. "Knowledge of current norms, statutes, regulations and other sources of law". Depending on the subject (branch of law) there should be specified a list of laws, the knowledge of which is necessary for the **first level**, and their volume. The student must understand the specifics of this subject, as well as understanding the place of each concrete branch or institution in the law system. A Bachelor student should know the basic regulations of the various branches. Evaluation is implemented by solving problems on a particular topic, interpretation, analysis and synthesis showing how the student has mastered a specific legal norm, applying the appropriate legal act. In general, a student should know the typical algorithm of implementation of a specific legal norm. This competence is assessed at the **second level** in the following manner. Theoretical knowledge and practical skills for the implementation of legal norms and the application of these rules in practice are assessed, as well as the ability to interpret, to analyse and synthesize on research and theoretical level, the ability to teach law disciplines. On the **third level,** theoretical knowledge and practical skills for the implementation of legal norms and the application of these norms in practice, as well as the ability to interpret, to analyse and synthesize on a research and theoretical level, and the ability to teach law disciplines, skills to implement training of legal personnel are assessed.

7.5. Examples of learning outcomes as evaluation criteria

Learning outcomes as evaluation critiera using as examples the following two subject specific competences:

Subject competence *9:*
"***Ability to understand professionally and explain the legal norms in the process of their application"***
To evaluate the formation of this competence, the following are considered:

- competent use of legal and comparative and legal approaches in the analysis of separate problems;
- ability to analyse legal situations, using legal language competently;
- ability to make reasoned decisions connected with implementation of rules of law, the logic and efficacy of the argumentation;
- skill of use of scientific and educational literature, analysis of sources of law;
- ability critically to analyse legislation;
- ability to interpret regulations competently;
- the correct drawing up legal documents according to legislation requirements.

Subject competence *10:*
"Ability to produce effective written or oral legal decisions and advice"
To evaluate the formation of this competence, the following are considered:
- ability to develop the legal solution of a specific problem and definition of legal consequences of adoption of such a decision;
- ability to qualify the facts and circumstances in a legally correct manner, to state one's own decision logically and with appropriate arguments;
- ability accurately to reason and laconic to formulate a legally significant answer given in an oral or written form;
- ability and skill of analysis and synthesis of the sources of law;
- correct use of legal language;
- during oral legal consultation to be able in the form of a colloquium to describe in detail all possible solutions of the specific legal problem, to answer any legal questions which have occurred to the client;
- to draw the legal conclusions in writing, and also the ability to explain in detail the answers to the questions asked by the client.

Examples and generalization of the practice of knowledge evaluation
The control system of educational achievements of students of higher education institutions includes various forms: on-going continuous control of progress, interim certification of students and final state certification. All the forms of control of educational achievements of students should be used in the educational process regardless of the forms of training.

On-going control of progress of students is a systematic check of educational achievements of students carried out by a teacher at current lessons in accordance with the curriculum of the discipline. Current control of progress of students is conducted according to schedule of training sessions. Various types of current control of students are defined according to the curriculum of the discipline: oral questioning, written control, combined control, presentation of homework, discussions, workshops, roundtables, case studies, tests, etc.

Interim certification of students in higher education institutions is carried out in accordance with the curriculum, academic calendar (schedule of the educational process) and training programmes. The period of interim evaluation of students in higher education institutions is called an examination session. Verification of educational achievements of students during the examination session is held in the form of exams on the subjects studied. The Higher education institution (by the

Scientific Council) determines the form of the exam independently: oral questioning, written examination, testing, integration testing, combined survey and others. Various types of testing can be provided: the use of texts with blank sections to be completed (with manual checking, using information technology, with different readers), computer.

Students who fully comply with all the requirements of the curriculum and programmes are admitted to the final state certification.

Final state certification of students is a procedure performed to determine their degree of mastery of the state compulsory standard at the appropriate level of education. Final state certification aims to test knowledge, skills and competences acquired in the process of studying the development of the relevant specialty. According to the results of the final state certification of students awarded an academic degree (Bachelor, Master) the qualification and a diploma of higher education is awarded.

Evaluation of educational achievements of students is based on measurement of knowledge. Measurement of students' knowledge must conform to the curriculum of the discipline. Measurements of students' knowledge are developed by higher education institutions in various forms: quizzes, tests (open, closed, combined, compliance, essays, etc.) laboratory, course work and others.

The most common way of describing the results is the traditional grading scale, which is based on a four point scale with the marks "excellent", "good", "satisfactory", "unsatisfactory". In different countries of Central Asia rating scales are used as well. For example, in Kazakhstan a rating scale is based on the score-rating letter system. The score-rating letter system is based on an eleven point scale, including assessment by letter system, corresponding to their digital equivalent in points, the percentage of assessment and traditional marks. The marks of letter system are letters of English alphabet from A (the highest mark) to F (the worst mark) depending on the level of knowledge. The digital equivalent of points are the Arabic numerals in the decimal system from 4.0 to 1.0 positive marks and 0 - unsatisfactory mark. The scale is rated in a percentage: with positive satisfactory marks including marks from 50% to 100%, and the unsatisfactory marks from 0 to 49 %.

For example:
- The **Subject specific competence** ***«Knowledge of current norms, statutes, regulations and other sources of law»*** is realized through the theoretical study of the text of legal acts for the purpose of clarifying to ourselves, explaining to others and implementing its content. This is done by listening to lectures, self-study for seminars, during which knowledge of the basic provisions of the law is consolidated, in the process of self-training with the aim of consolidation and generalization of knowledge. The results of mastering this competence are determined by computer-based testing, evaluating of oral responses in seminars, assessment of written work, assessment of results of educational training activities. In Kazakhstan, Kyrgyzstan, Uzbekistan and Tajikistan the teacher is required to produce a scheme of work/module profile, which should include the model and

work programs on the subject, the technology of lectures and seminars, questions on the subject and tests, glossary of the subject, topics of the abstracts and criteria ratings, references of domestic and foreign authors. This competence is acquired during the whole training cycle. Learning outcomes - implementation of competence is based on the developed general criteria in the countries for evaluation of knowledge, which are detailed in each institution.

- The **General competence *"Ability to apply knowledge in practice"*** is realized in the process of work- based training activities, getting juridical work experience, in the consultation process in the legal clinic, in the various types of business games, subject "Olympiads", scientific and scientific-practical student conferences and other types of creative work aimed at developing a practical approach to the implementation of students' knowledge. This competence is acquired throughout the training cycle.

8. Cycle Level Descriptors (with reference to Qualifications Frameworks) in terms of Learning Outcomes

At achievement of learning outcomes, the lawyer will be able to:

- Demonstrate knowledge and understanding of legal norms and the ability to analyse text sources of national law
- Understand and explain the meaning and content of legal norms
- Implement legal norms in practice.

At achievement of learning outcomes, depending on the level (cycle) of training, a lawyer will be able to:

First Cycle (level) of education – Bachelor: demonstrate and implement the knowledge and skills of practical orientation.

Second Cycle (level) of education – Master: demonstrate and implement the knowledge, skills of practical, pedagogical and scientific orientation.

Third Cycle (level) of education – **Doctorate:** demonstrate and implement the knowledge, skills of practical, educational, scientific orientation for the purpose of scientific research, training of scientific and pedagogical staff.

Level descriptors

I. Bachelor – as a result of training the graduate is able to:

1. Demonstrate basic knowledge of existing legal instruments and the basic sources of law.
2. Demonstrate knowledge and ability to implement the laws needed for a specific case of national and international acts, aimed at protecting and promoting fundamental human rights
3. Implement skills in drafting legal documents specific to a particular subject of future work.
4. Demonstrate a clear understanding of the proceedings in the pre-trial and court proceedings in the realization of a specific legal case.
5. Provide the ability for professional understanding and clarification of the legal norms in the realization of specific legal acts.
6. Demonstrate the ability to identify and articulate the legal interests of the parties in the protection of the rights of individuals and legal entities.

7. Demonstrate the ability to navigate and use the criminal, administrative-judicial, disciplinary, civil procedure as part of their official duties.
8. Demonstrate and use the ability to navigate the hierarchy and subordination of legal acts with a view to deciding on a specific legal case.
9. Analyse legal problems in the realization of their rights and duties.
10. Provide oral and written qualified legal opinion and advice in specific cases for individuals and legal entities.
11. Apply appropriately industry-specific legal rules to a particular legal case (casus).
12. Demonstrate the ability to determine ways of solving legal conflict between individuals and legal entities.

2. Master degree – as a result of training the Master is able to:

1. Demonstrate knowledge of historical-legal significance of the current and other normative-legal acts, as well as basic sources of law of the modern period and other historical periods and their development trends.
2. Demonstrate knowledge and ability necessary to identify national and international acts aimed at protecting and supporting common human rights as well as demonstrate the ability to generalize the knowledge and skills.
3. Realize skills in drafting legal documents, professional-legal, pedagogical and scientific orientation.
4. Demonstrate clear idea of the proceedings in the pre-trial court proceedings in the realization of a specific legal case and be able to predict the development of scientific and legal affairs.
5. Professionally clarify legal norms, as well as during the educational process and scientific activities.
6. Demonstrate the ability to elicit and formulate the legal interests of the parties in the protection of the rights of private and legal persons at the state level and in the interests of the political system of society.
7. Demonstrate the ability to navigate criminal proceedings, administrative proceedings, disciplinary, civil and legal procedures as part of their official duties, as well as in the process of research and teaching activities.
8. Demonstrate and use the ability of orientation in the hierarchy and subordination legal acts with a view to decide a specific legal case, as well as to realize scientific research.
9. Analyse legal problems in the realization of rights and duties of officials and to consider the legal issues in the development of modern law and state.
10. Produce oral and written qualified legal opinion and advice in specific cases for individuals and legal persons, also to clarify political and legal acts.
11. Provide skills on the use of legal norms to a specific casus (case), and to be able to generalize the results to inform legal practice.
12. Demonstrate the ability to determine the solubility of a legal conflict between private and legal persons, state and public interests.

Doctoral degree – as a result of training the Doctor is able to:

1. Demonstrate basic knowledge of existing legal instruments and the basic sources of law in the modern period and other historical periods, also their development trends at the scientific and theoretical level.

2. Demonstrate knowledge and apply as required for the specific case national and international acts aimed at protecting and supporting common human case national and international acts, also Demonstrate knowledge and apply required for the particular case of national and international acts, aimed at protecting and promoting fundamental human rights, as well as the ability to realize the generalization of these skills and knowledge on a scientific basis, to demonstrate knowledge of the causes and trends of development.
3. Possess skills necessary to draft legal documents, in line with professional legal, pedagogical and scientific orientation using scientific methodology.
4. Demonstrate a clear idea of the proceedings in pre-trial court proceedings in the realization of a specific legal case and use scientific forecasting of the development of legal relations also to produce scientifically significant proposals for their improvement.
5. Professionally understand and clarify the legal norms in the realization of specific laws, in the process of the training sessions, scientific activities, also to generalize the results of scientific knowledge.
6. Show the ability to elicit and formulate the legal interests of the parties in the protection of the rights of private and legal persons at the state level and in the interests of the political system of society.
7. Demonstrate the ability to understand criminal proceedings, administrative proceedings, disciplinary, civil and legal procedures in the framework of his/her official duties, in the process of research and teaching at the level of the development of didactic tasks and procedural needs.
8. Demonstrate and use the ability to navigate the hierarchy and subordination of legal acts with a view to deciding on a specific legal case, as well as demonstrate knowledge of the modern legal hierarchy in the process of research on scientific and theoretical level.
9. Analyse legal problems in the realization of rights and duties of officials in applying the law, and consider them in the development of modern law and the state, as is needed to monitor and interpret the development of legal theory and practice.
10. Provide oral and written qualified legal opinions and advice on specific cases for private and legal persons, to explain the political and legal acts, to formulate ideological criteria in the evaluation of legal phenomena.
11. Perform skills on the use of legal norms to a specific casus (case); be able to generalize the results to inform legal practice and identify new patterns of the development of the law.
12. Demonstrate the ability to determine the solubility of a legal conflict between private and legal persons, state and public interests, to analyse critically modern state-legal theory and practice and the trends of its development.

9. Conclusions

In conclusion, it should be stated that there is a different level of participation of the countries in the Bologna process and differing degrees of reference to the Dublin descriptors in national systems of education, as well as some differences in legislation and in the level of development of the national legal systems of Central Asian countries.

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Annex 1. A note on Tuning in the Central Asian context

Brief Summary of Tuning methodology with reference to TuCAHEA (please refer also the material on www.tucahea.org)

The Tuning process is organised in a series of steps, each one of which creates the premises for those that follow it. Its overall purpose is to provide knowledge, insight and tools for transforming Higher Education from an input-based, faculty centred system to an output-based system which places at its centre the needs of the learner. Tuning is carried out by committed groups of academics working together in a transnational context, who also take into account feed-back from students, graduates, employers and other interested parties.

Tuning is developed along 5 "lines", which we summarise as follows:

Line 1. "General (or Generic) Competences": *according to the definition used in Tuning, competences are everything that the learner knows, understands and is able to do at the end of a process of learning. Attitude and 'mindset' are included in this very broad definition of 'competences'. The purpose of the educational process is to foster the development of the learner's competences. In Tuning, a distinction is made between the competences that are directly connected to the disciplinary or thematic area of study (the "Subject Specific Competences, line 2) and those that are important in many or all areas of study. These are the "General" or "Generic" Competences in Tuning, and are similar to what are often called 'transversal skills' – that is abilities that are useful across many or all subject areas.*
The first step in Tuning involves developing an awareness of the importance of the "General Competences" in the educational process. Traditionally universities have concentrated on the transfer of knowledge specific to the area of study, and the formation of General Competences has been left largely to chance.
In order to develop awareness of the importance of the General Competences (GCs), Tuners develop lists of important General Competences, and carry out consultations on their importance and on the degree to which they are currently developed by universities. The consultations are with employers, students, graduates and academics.

Line 1 For TuCAHEA: 'Tuners' read and discussed the lists of GCs that have been developed in other countries/regions, considering the differences and the similarities. It must be stressed that the 'lists' are not fixed, and never will be able to include all the GCs which will be important for students to develop. Rather, the lists contain a group of GCs that in the various geographic and cultural contexts the 'Tuners' have considered particularly significant.

The TuCAHEA Tuners reflected about what, in their view, the role of higher education can be in their country and region. What did they think could be the key GCs and the values that higher education can foster? This vision of the potential role of higher education guided them.
They read and discussed the existing lists of GCs, deciding which ones they wanted to keep, which they wished to modify, which they wished to eliminate. They

consulted the volume on Competence-based Learning (pdf on the TuCAHEA website) for inspiration.
At the country meetings in January/February 2013 (with their preparation and follow-up) each country established an agreed list of GCs. Each of these comprised between 20 and 30 key GCs. The result was achieved jointly, though discussion of the options and final consensus, through a series of 'tours de table', and when feasible in consultation with colleagues, students, graduates and employers, in order to make the Project visible, and to give ownership of the results at each stage.
The results of the work of each country's Tuning Group were included in the Conference Materials prepared for the First Plenary and Working Meeting, held in Almaty in April 2013. At the Almaty meeting the five lists were presented, discussed and then merged, in order to reach consensus on a regional list of the most important Generic Competences.
At the Almaty meeting agreement was made on how to organise consultations in the five countries on the perceived importance and level of achievement of the GCs among academics, employers, students and graduates. The consultation was held after the Almaty meeting and its results shared using the www.tucahea.org website, presented and discussed in the Second Plenary and Working Meeting, held in Bishkek in November 2013.

Line 2. "Subject Specific Competences":
The second 'line' or step in Tuning is to form transnational Subject Area Groups (SAGS). This means that there should be at least one academic representing the Subject Area from each participating country. Each SAG, working together, first of all maps the way its Subject Area (disciplinary or thematic) is addressed today in each country. The members reflect on communalities and differences, and formulate a list of competences specific to the Subject Area. These are called the 'Subject Specific Competences'. The list, as is the case with the General Competences, will never be able to include all useful competences, nor will any one student ever develop all the competences in the list. Rather they are a representative list of competences that are significant for the Subject Area.
The Subject Area Groups also define which are more important in the first, second and third cycles, and to what level they should be developed. In this process, again, the members consult with other academics, students, graduates and employers to gain perspective on how important the competences are and how well universities form them at present.

Line 2 infor TuCAHEA
In TuCAHEA, the SAGs are Business and Management, Economics, Education, Engineering, Environmental Protection, History, Language, and Law. This means that where possible there was one academic (belonging to a TuCAHEA partner university) for each of the above areas, so that in the Plenary meetings (and between meetings, by Internet) they could work together.
Before the Launch meeting, the members from each country were chosen and given information, material and time to digest it, so that when the SAGs met in Almaty they were able to make productive use of their time. They looked at the materials produced for their SAG, when possible, in other countries and regions,

but created their own competence lists autonomously. Each SAG finalised their list of Subject Specific competences (SCs) at the Almaty meeting. These competences were presented in the pan-Central Asian consultation, along with the General Competences.
The SAGs were in contact during the months between the Almaty and the Bishkek meetings, so that in Bishkek they could begin to draw up their "Guidelines and Reference Points" or "Conceptual Framework". The “Guidelines and References Points” were improved at the Samarkand meeting (November 2014) and finalised in the Bishkek meeting (December 2015).

Line 3. Measurement of the Volume of Learning (the use of ECTS and Workload Based credit systems): *The third step (or strand) of Tuning regards the volume of learning, and the various ways of measuring and defining it. In the European context, the volume of learning is measured in terms of the time needed for the learner to complete all the activities associated with a piece of learning (contact hours with the teacher, revising, group work, reading, personal study or whatever else is required). This is in accordance with the learner-centred model of higher education, and its careful use allows universities to plan the learning activities effectively. Monitoring systems make it possible to ensure that the credits are allocated properly and the students' time is used effectively.*

Line 3 in TuCAHEA
In TuCAHEA ECTS and other systems and methodologies in use and in development around the world, including the Latin American Credit Reference System (CLAR), were examined and compared with current practice. This step too contributed to redefining the learning process from the learner's point of view, and developing appropriate planning and evaluation tools for delivering well-organised and effective programmes. This step was prepared in the national meetings and re-considered and elaborated in the Plenary conferences and working meetings. The TuCAHEA SAGs mapped current practice in their own Subject Areas and included their findings and recommendations in their Subject Area Guidelines and Reference Points.

Line 4. Approaches to Learning, Teaching and Assessment:
Once the key GCs and SCs for a certain number of SAGs have been established (and it has been accepted that the aim of Higher Education is to form or enhance these competences in the learner) the question then arises: how can this best be accomplished? How to organise a degree programme so that the learner who completes it will have the required and desired competences?
Tuning involves mapping existing or potential ways of developing the learning environment, in order to ensure that the learning and teaching activities actually help to develop the desired competences, and also that the assessment methods are transparent, understood by students and staff, and adapted to ascertaining that the competences have been formed.
There must be alignment between the desired competences, the learning/teaching approach and the assessment method. For example, if it is recognised that 'ability to work in a team' is an important competence, there will not be a course on teamwork, but rather the degree programme will be organised in such a way that

learners are asked in some course units to carry out certain tasks working in groups. A part of the assessment of the learner's performance will be based on how well he or she worked in the team. Indicators for levels of competence can be taken from the Competence-based learning book.
To give another example, a desired competence might be "ability to apply knowledge in practice". What approach to learning and teaching would be useful? a course unit might have a task-based component in which the task consists of deploying academic or theoretical knowledge in a practical situation. The learner might perform a placement in which he or she gains experience in using theoretical knowledge in practice. The assessment method would need to be designed to ascertain whether the learner was successful.
Although in many countries even today there is often a single method for assessment (an essay, a written or oral test, for example), it is necessary to develop diversified methods for assessing the degree of achievement of various competences. This is a key task for Tuning.

Line 4 in TuCAHEA:
In order to develop knowledge of how approaches to Learning, teaching and assessment (L/T/A) can be optimised, the TuCAHEA 'Tuners' looked at how, in their country or their institution, or even potentially, in the abstract, the most significant Subject Specific and General competences are or could be developed, and to what level.
In the case of General Competences, for example, normally there will not be specific courses to 'teach' each competence. The process of ensuring that the students achieve the desired results means first defining the competences to be formed in a specific degree programme; then the staff, working together, must organise the approaches to learning and teaching used in the various course unit in order to ensure that all the key competences are covered.
TuCAHEA Tuners reflected together on how to form each competence. They dedicated much time and thought to explaining exactly what the meaning of each competence is, how it is learned, taught and assessed at present, and how it could be learned, taught and assessed. Working in the SAGs, they defined the levels to which each competence should be formed at the various levels of higher education (BA, MA, PhD), and they illustrated how this can be done, on the basis of which criteria (Programme Learning Outcomes). These findings too are contained in the present publication.

Line 5. Quality
In the consolidated Tuning methodology, the final line or step includes putting into practice all the insights and tools developed, particularly with a view to developing the knowledge of how to ensure quality and hence of a non-prescriptive but real 'quality culture' in the higher education institutions themselves. Creating a 'quality culture' means that everyone concerned shares in building 'quality', in monitoring results and in improving the quality of our students' learning experience and its relevance to their future professional and personal lives.
Tuning has in recent years developed new important tools such as a model for elaborating Degree Programme Profiles, overarching definitions of competence levels to be achieved in single Subject Areas (Meta-profiles,), and Sectoral

Qualifications Frameworks for large domains (such as the Social Sciences, or the Human Sciences).

Line 5 in TuCAHEA

In TuCAHEA, as foreseen, the country groups and the Subject Area Groups developed many such tools for the Central Asian Higher Education Area (CAHEA). These are the object of the present publication and of the other material contained on the www.tucahea.org website. Already many of the results have been taken into account in the partner universities. In the future, the findings of the TuCAHEA Consortium will provide an important foundation for enhancing Higher Education in the Central Asian macro-region and elsewhere in the world.

Annex 2. Overall number of respondents in the consultation

Number of Respondents: General Competences

	Academics	Employers	Students	Graduates	Total
No area	662	106	740	195	1703
Business	434	123	682	172	1411
Economics	396	125	647	182	1350
Education	459	226	581	248	1514
Engineering	386	147	499	162	1194
Environment Protection and Food Safety	332	163	474	242	1211
History	319	86	218	111	734
Language	293	129	391	194	1007
Law	281	121	534	128	1064
Total	3562	1226	4766	1634	11188

Number of Respondents: Subject Specific Competences

	Academics	Employers	Students	Graduates	Total
Business	462	123	676	169	1430
Economics	401	125	628	179	1333
Education	403	293	524	238	1458
Engineering	363	143	461	160	1127
Environment Protection and Food Safety	322	123	451	191	1087
History	305	78	199	97	679
Language	266	134	342	183	925
Law	364	116	564	126	1170
Total	2886	1135	3845	1343	9209

Annex 3. The TuCAHEA Template for Subject Area Group work which has formed the basis for the present "Guidelines and Reference Points"

I. The **Template** for publishing and making available the results of the work of the Subject Area Groups is structured as follows:

1. Introduction
2. Description of the Subject Area
3. Degrees typically offered at the three cycle levels
4. Typical occupations of graduates at the three cycle levels
5. The Subject Area competences; the most relevant Generic competences
6. Cycle level descriptors (with reference to Qualifications Frameworks) in terms of competences
    a) First Cycle (Bachelors') degree
    b) Second Cycle (Masters') degree
    c) Third Cycle (Doctoral) degree
7. Approaches to learning, teaching and assessment
8. Cycle Level descriptors (with reference to Qualifications Frameworks) in terms of Learning Outcomes
9. Conclusion
10. List of Members of the Subject Area Group
11. References

II. The above is the structure in which the results have been expressed.

Before they began this task, the SAGs were instructed that:

"Writing the 'Guidelines and Reference Points' does not mean simply filling in the spaces [in the Template illustrated below]. Rather, it is the formulation, to be offered to others, of the results of a process of analysis and reflection, conducted by the Subject Area Group, in dialogue with other Subject areas.

"That is, it is the final result of a process. We have begun the process last spring, in the Country Meetings and the Almaty meeting, creating the Central Asian ***competence lists****, general, and for each of the eight Subject Areas. We have continued it during the summer [2013], with our* ***consultation****.*

"During the Training Visit [September 2013], we started to analyze the results of the consultation, and to discuss how to organize the work of the Subject Area Groups. This analysis and discussion will continue in the Country meetings, in order to prepare for the Bishkek Plenary [November 2013].

Here is a brief explanation, point by point, given for each part of the Template:

1.	Introduction	Here there can be some general remarks, including a mention of whether the Subject Area has already been the object of Tuning in some other country or region, and something about the hopes of the SAG that the Guidelines will be useful.
2.	Description of the Subject Area	Under this point, the Subject Area should be defined: it should be placed in the academic map, and if there are several related areas included in the Subject Area, these should be identified and discussed. Furthermore, comments about the general significance of the Subject Area (for research, for society, for employment) should be made.
3.	Degrees typically offered at the three cycle levels	In order to approach this point, each member of the SAG should explain to the others what degrees at each cycle are usually offered at his/her university or in the country. There may be a high degree of communality, but there may also be significant differences, which should be mentioned. It is important also to note whether the Subject area is typically taught separately – as a dedicated Degree Programme – at all three cycle levels, or whether it is also taught as a minor or as single courses in Degree Programmes in other Subject areas.
4.	Typical occupations of graduates at the three cycle levels	Here, again considering the variety of situations in the five countries represented in the SAG, there should be a discussion of where graduates find employment, and with what prospects.
5.	The Subject Area competences; the most relevant Generic competences	Here, first of all, there should be an illustration and an analysis of the results of the consultation, and a discussion of what the consultation seems to show. It is to be remembered that the consultation does not say which the most important competences are, but it helps the SAG to define and understand them. Please note that the most relevant Generic Competences should also be identified and discussed. Under this point (or as an Annex) the list of the SAG's specific competences (as used for the consultation); and the Generic competences identified as especially important for the SAG (about 10) should be included.
6.	Cycle level descriptors (with reference to Qualifications Frameworks) in terms of competences	The concept of level of competences needs to be considered, and a Subject Area Framework formed, which is related to the Qualifications Frameworks implemented in other macro-regions, and which – along with the versions of the other SAGs – can lead to the formation of a Central Asian Qualifications Framework.

6.1 6.2 6.3	First Cycle (Bachelors') degree Second Cycle (Masters') degree Third Cycle (Doctoral) degree	The a Subject Area Framework should be articulated in the three cycles. The format should/can be the 'Meta-profile' format which has been/is being used in other macro-regions, such as the EQF or the QF for HE used in the EHEA .
7.	Approaches to learning, teaching and assessment	Here the discussion can be articulated in the following way: 1. What are the methods that are used normally in each country and each institution today? 2. Considering the competences that have been identified under point 5 as most relevant, how could these formed? Using which learning methods? Which teaching methods? 3. How assessment carried out today in each context? 4. How could the competences identified under point 5 as most relevant be assessed? At the first cycle, at the second cycle, at the third cycle? 5. Can we identify examples of **Learning Outcomes** as a basis for Assessment? Can wegiveexamples? Can we produce general formulations?
8	Cycle Level Descriptors (with reference to Qualifications Frameworks) formulated in terms of Learning Outcomes	Is it possible to formulate the Learning Outcomes which correspond to the levels of competences defined under point 6?
9.	Conclusions	Under this point, you may place any general observations or indications of particular insights that have emerged, or points that the Subject Area Group thinks are particularly relevant, or that need further work.
10.	List of Members of the Subject Area Group	Here the names of the SAG should be given, with the indication of their University; the Chair should be indicated, and all the other people that have contributed – perhaps coming to some of the meetings or giving advice should be mentioned and thanked.
11.	References	Here included any publications or web links that are relevant, such as "Guidelines and Reference Points" from the same or related Subject Areas in other countries and macro-regions.

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