

The European Union's Tacis TRACECA programme
for Armenia, Azerbaijan, Bulgaria, Georgia, Kazakhstan, Kyrgyzstan, Moldova,
Romania, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan

EUROPEAID/126298/C/SER/MULTI

Strengthening Transport Training Capacities in NIS Countries

Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic,
Moldova, Tajikistan, Turkmenistan, Ukraine, Uzbekistan

CURRICULA APPRAISAL REPORT

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This project is funded
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A project implemented by
NEA and its partners STC,
TRADEMCO and Wagener &
Herbst Management
Consultants



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1 Objectives

This curricula appraisal aims to give an overview of the development stage of the recipient institutions in the application of the Bologna Process and in the integration of "Transport Planning" (TP), "Investment Appraisal" (IA) and "Multi Modal Transport" (MMT) modules into the education process. The appraisal is carried out on the basis of the preliminary studies, the curricula handed over by universities and training institutions and the meetings with the responsible representatives of the institutions.

The appraisal is based on the limited information available but it allows conclusions on common practices in the countries and on development trends to be made.

The area to be covered comprises NIS TRACECA countries Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Ukraine and Uzbekistan.

2 Method

The universities were assessed against the following key criteria:

1. Degrees, faculties and curricula

- Degrees offered: Bachelor degree, Specialist diploma, Master degree, etc.
- Directions and specializations offered at the present time
- "Transport Planning", "Investment Appraisal", "Multimodal Transport" modules: whether they are covered in curricula and in the lecture materials

2. Bologna Process (If it is possible can you add an analysis on how the Bologna process is worked through within the ENPI countries?)

- Participation of the recipient institutions in the Bologna Process
- Structure of the curricula: whether it conforms to the requirements of the Bologna Process, that is, transparent and modular
- Implementation of a credit point system (e.g. ECTS)

3. Didactics

- Workload
- Presence of theoretical and practical elements (e.g. workshops, case studies, practical trainings)



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3 Curriculum Appraisal by University

3.1 Armenian State Agrarian University (ASAU)

Why this one has been chosen? IT is not too much on planning?

Terms of Reference: "The following counterpart institutions have been selected during the analytical and preparatory phase:

- In Armenia, the State Engineering University of Armenia should be the main counterpart, including its Gumri branch and Vanadzor branch. Other institutes to be possibly involved in the project activities include the State Agricultural University of Armenia with its following specializations – Agricultural machinery and equipment, Transportation and Road traffic organisation and management."

ASAU (former Armenian Agricultural Academy) was founded in 1994 on the basis of the Armenian Agricultural and Yerevan Zootechnical and Veterinary Institutes. These two higher educational institutions, in their turn, were established in 1930 on the basis of the faculty of agriculture of Yerevan State University.

3.1.1 Degrees, faculties and curricula

▪ *Academic programs offered by the University are as follows:*

- Bachelor degree
- Specialist diploma
- Master degree
- PhD degree

▪ *University faculties and curricula*

The educational structure of the university is composed of six departments (faculties) as follows:

- Agrarian Department
- Department of Foodstuffs Technologies
- Department of Economics
- Department of Veterinary Medicine and Animal Husbandry
- Department of Mechanization and Transportation
- Department of Land-reclamation, Land Tenure and Land Cadastre

The University has a highly qualified professorial and pedagogical staff of 627 lecturers, 72 Doctors of Sciences and 290 Candidates of Sciences. 9870 students (in 2007) are enrolled at the Academy, and among them 4230 are in the day time and 4920 are in the corresponding studies departments, 181 - at the college, 288 – at the lyceum, 119 – in the Master's degree and 132 – in the Post graduate departments. Since September 2004 the two-stepped educational system has been implemented in all 37 specialities of SAUA. After graduating from the University graduates receive Bachelor's degree. The best ones can continue their studies in Master's degree. In the Department of Education by Correspondence examinations are held on 22 specialties. According to the resolution of the Republic of Armenia in September 2004, department branches were founded in Sisian town (Sjunik Region) and in Vanadzor town (Lori Region). Six specialized Academic Councils operate at the Academy regarding the scientific degrees of a candidate and a doctor. These are the research board for 15



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specialties: Agronomy, Veterinary Medicine, Animal Husbandry, Engineering, Technologies and Economics.

- *“Transport Planning”, „Investment Appraisal”, „Multimodal Transport“ modules*

Based on the information available the modules are not covered in the lecture materials.

- *Erasmus Activities*

University participate in Erasmus Mundus programme; External Cooperation Window for Georgia, Armenia and Azerbaijan (Lot 6). However, based on the information available priority thematic fields for mobility do not include transport or transport related studies.

3.1.2 Bologna Process

- *Participation of the University in the Bologna Process*

Can you sum them up in a table? It would be very useful for us to prepare an internal note to DG EAC on this or also to discuss it at the level of the Eastern Partnership platform. Armenia signed the Bologna Declaration in May 2005 and in this respect it is obliged to make major changes not only in the higher education sphere but in the whole system of education as well.

The ASAU will be recognized and accredited by the European Union as a higher education university with institutional standards for academic credit, curriculum, qualified faculty and qualified students who are accepted by world-class universities in agricultural science and education. The transformation will be completed and fully implemented by 2010.

Scope of Work, Phase I. Phase I began 15 August and continued through 31 December 2006

Activities: SAUA developed a work plan “Higher agricultural educational reforms in Armenia. The results are summarised below.

Phase I August 2006 - December 2006		
Scope of Work	Impacts	Results
1.Program development. 2.Priority Initiatives and activities. 3.Organizing developmental work groups.	Report from State Agrarian University in Armenia (SAUA): -Case findings; -Recommended activities; -Assessment of high priority activities; -SWOT analysis.	Detailed planning calendar: -Guidelines on workshops in credit system and professional development reforms; -Strategy for accelerating change, tactics; -Sequenced priority activities.



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Phase II began 15 March 2007 and continued through 30 September 2007.

Phase II March 2007 - September 2007		
Scope of Work	Impacts	Results
<p>1. ECTS Credit System.</p> <ul style="list-style-type: none"> -Developing courses and curricula; -Developing course syllabi; -Developing a transcript management system; -Administering a transcript management system. 	<p>Primary:</p> <ul style="list-style-type: none"> -Improved curriculum and course planning; -Increased transparency in student evaluation and grade assignments; -Increased teaching effectiveness; -More accurate student evaluation and grade assignments. <p>Secondary:</p> <ul style="list-style-type: none"> -Improved articulation with other Armenian universities and Ministry of Education; -Improved English usage by professors and students; -Increased student learning of criterion materials; -Improved international mobility of Armenian graduate students; -Enhanced knowledge articulation and information leverage; -Improved scholarship by professors; -Improved student competence through degree planning. 	<p>A public access website was launched with:</p> <ul style="list-style-type: none"> -327 downloadable training documents in Armenian, English and Russian; -110 lecturers and 20 administrators received translated copy of "Big Picture Strategic Plan"; -Description of strategies in order to achieve the goals of quality, international mobility, autonomy, transparency and social access to higher education.
<p>2. Professional Development.</p> <ul style="list-style-type: none"> -Teaching and learning methods. -Student evaluation methods and tools. -Computer applications for higher agricultural education. 	<p>Impacts included:</p> <ul style="list-style-type: none"> -Improved accuracy in student evaluation and grade assessments; -Improved articulation among AM/EU/US universities; -Improved English usages by professors and students; -Improved scholarship by professors; -Improved faculty and student computer skills; -Increased student learning; -Increased teaching effectiveness; -Improved student recruitment. 	<p>Success indicators included:</p> <ul style="list-style-type: none"> -Development and adoption of new curriculum materials; -Adoption of new teaching and learning methods; -Use of new educational technologies; -New methods of student assessment and evaluation; -Development of excellent professors; -Demonstrated innovative practice; -Expanded global viewpoints.



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ECTS Credit System Overview		
<p>Activities:</p> <ul style="list-style-type: none"> -279 clock-hours of technical training to 66 faculty members and 8 administrators; -specific training that included 90 clock-hours in each of three topic areas; -seven American professors from Clemons University, New Mexico State University provided workshop training; -logistical support from Texas A&M University. 	<p>Methods included:</p> <ul style="list-style-type: none"> -case studies; -computer-assisted instructions; -demonstrated-performance by both workshops presenters and by individual lecturers; -experiential training; -student intern programs; -formative evaluation/feedback on materials and methods developed by participants; -group/committee/team work; -guided discussions; -guided-problem solving; -independent study; -individual projects; -post-workshop with follow-up consultations; -readings, seminars and symposia. 	<p>Credit System Deliverables:</p> <ul style="list-style-type: none"> -Each of the four themes delivered a series of three 10-day workshops with 75 hours of faculty training in each topic area. -A total of 234 hours of technical training was delivered to the four groups. -Using a pre-post activity-driven workshop method, 22 key professors and administrators participated in each of the first three topic areas (225 hrs) and 8 key administrators were included as a specially organized administrative group (9 hrs). -Each of the workshops provided prolonged engagement with follow-up consulting, group/committee/team work, and guided problem solving.

Professional Development Overview		
<p>Activities:</p> <ul style="list-style-type: none"> -200 clock-hours of technical training to 77 faculty members; -specific training that included 90 clock-hours in teaching and learning methods; -90 clock-hours in developing student evaluation methods and materials; -20 clock-hours in computer applications in higher agricultural education; -seven American professors from Pennsylvania State University, Texas A&M University and the University of Georgia-Athens provided workshop training; - logistical support from Texas A&M University. 	<p>Methods included:</p> <ul style="list-style-type: none"> -case studies; -computer-assisted instructions; -demonstrated-performance by both workshops presenters and by individual lecturers; -experiential training; -student intern programs; -formative evaluation/feedback on materials and methods developed by participants; -group/committee/team work; -guided discussions; -guided-problem solving; -independent study; -individual projects; -post-workshop with follow-up consultations; -readings, seminars and symposia. 	<p>Professional Development Deliverables:</p> <ul style="list-style-type: none"> -The first two topics were delivered as a series of three 10-day workshops with 75 hours of faculty training in each topic area. -Eight 2½ hour workshops in computer applications were delivered to 17 selected faculty members. This series included three sessions on using Word software, two using Excel software, two using PowerPoint and one integrated Word-Excel-PowerPoint session. -Three 2½ hour computer-based course management system workshops were delivered to 26 selected faculty members in which lecturers created their own electronic course materials. -A dedicated website www.sauabologna.com includes downloadable training documents in Armenian, Russian, and English.



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Additional Accomplishments

Bonus Activities: There was a major ASAU commitment to the development of a HEI training monograph, *The Bologna Process: Reforms and Strategies*. The guidebook documents and describes policies, procedures, and materials necessary to achieve the transformation of university curricula. The 150 page Armenian handbook is to be used to communicate policy and strategies for universities as they apply ECTS criteria in first and second cycle degree programs.¹

- *Structure of the curricula*

The curriculum is modular structured and transparent.

- *Implementation of a credit point system*

The University had introduced ECTS in 2008.

3.1.3 Didactics

- *Workload*

The academic year is divided into two semesters. The University offers a variety of teaching, working methods and evaluation.

- *Presence of theoretical and practical elements*

Theoretical elements: Classes, lectures, self-study

Practical elements: Workshops, case studies, practical trainings, lab-work.

Educational-Methodical Centre arranges, regulates and controls the educational process and educational-methodical activity of the faculties.

The University has two training and experimental farms with total area of 1130 ha, specializing on livestock, plant, fruit, grape, vegetable production. Soon the completely renovated training and experimental plant for working out milk and producing dairy products will be set working. Magistrates, post graduates and scientists of the University carry out their practical research work in these facilities. The authorities of the University introduce extensive programs in order to stabilize functioning of the training-farms and to arm with progressive technical appliances².

3.2 State Engineering University of Armenia (SEUA)

State Engineering University of Armenia (Polytechnic) is the leader of national higher technical education. It is famous not only in our country, but also abroad and is well known for its high rating.

Since its foundation (1933) up to this day SEUA has had over 110.000 graduates. Today the University, including its 3 regional campuses in Gyumri, Vanadzor and Kapan, has over 10.000 students and about 1.000 full-time faculty members, most of them carrying scientific degrees.

¹ <http://www.armagrar-uni.am/eng/eng-index.htm>

² *Ibid*



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3.2.1 Degrees, faculties and curricula

▪ *Academic programs offered by the University are as follows:*

- Junior Specialist (3 years)
- Bachelor of Engineering (4 years)
- Diplomaed Specialist (5 years)
- Master of Engineering (2 years)
- Researcher (2 years)
- PhD (3 years)

▪ *University faculties and curricula*

31 majors are offered for the Bachelor of Engineering Degrees, 29 majors offered for the Master of Engineering Degree, 17 majors offered for Engineers-researchers.

Faculties:

- Mining Engineering and Metallurgy
- Computer Systems and Informatics
- Cybernetics
- Mathematics
- Machine-building
- Mechanics and Machine Science
- Radio Engineering and Communications Systems
- Social-Political Disciplines and General Economics
- Transport Systems
- Chemical Engineering and Environmental engineering
- Electrical Engineering
- Power Engineering
- Languages
- Management and Economics

The Departments are the main divisions of the University, organizing the academic-methodic and scientific research processes. They are specialized in the directions of information technologies, Material Science, Power Engineering, Electrical Engineering, Mining Engineering, Chemical Engineering, Machine-building, Transportation Infrastructure, etc.

Education on different specialties or parts of the curriculum, as well as the corresponding methodic and research works are carried by the Departments' Chairs or by the Chairs of University subordination.

Graduate Division:

Main Characteristics of the Program: The main requirements set for the educational program of a Research-engineer are determined by the qualification characteristics of the post-graduate education which is performed according to the approved curricula on the specialties.

The curricula of a Research-engineer on the specialties consist of two main parts: educational and research.



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The content of the research part of the curriculum is determined by the theme of dissertation, which is approved of in the fixed order with the scientific supervisor. The theme of the dissertation must be up-to-date and must correspond to the requirements set for it.

During the whole period of the post-graduate study, including the program of Research-engineer, the educational research practice at the corresponding department (chair) is foreseen, with the aim of acquiring educational and methodic experience. A post-graduate student who has successfully performed his individual plan can have a job of 0.5 shift at a corresponding chair.

The training of a Research-engineer is performed in a two- year period of time. During this period a post-graduate student takes qualification exams, as well.

Table 1: The disciplines of the educational program for a Research Engineer

INDEX	DISCIPLINE	CREDITS
THE HUMANITIES		8
11 601	Pedagogics and Psychology	2
	<i>Pedagogic Practice</i>	
11 602	Foreign Language	4
	<i>Qualification Exam in Foreign Language</i>	
11 603	Phylosophy	2
	<i>Qualification Exam in Phylosophy</i>	
DISCIPLINES OF GENERAL EDUCATION		12
MT 5XX	Elective Course in Mathematics	4
11 604	Pathent Science	1
11 605	Elaboration and Management of Projects	1
11 606	New Teaching Technologies	2
11 607	Informatics	2
	<i>Qualification test in Informatics</i>	
11 608	Automation of Scientific Research	2
SCIENTIFIC RESEARCH WORK		2
	<i>Testing of the Scientific Work</i>	
XX 601	Scientific Seminar	2
SPECIAL DISCIPLINES		22
XX 5XX	Elective Course on Specialty – 1	2
XX 5XX	Elective Course on Specialty – 2	4
XX 5XX	Elective Course on Specialty – 3	4
XX 602	Special Course on the Specialty – 1	2
XX 603	Special Course on the Specialty – 2	2
	<i>Qualification Exam in the Specialty</i>	4
	<i>State Exam in the Specialty</i>	4
TOTAL		44

Source: http://www.seua.am/eng/asp/programm_ii/course_program.htm

Order of final testing and awarding the qualification Degree of a Research-engineer: Final testing of the two-year training according to the program for a Research-engineer is aimed at awarding a corresponding qualification degree (diploma) with the right of the third year of study at the post-graduate division to complete the dissertation and defend it.

Testing of the two-year phase of training at the Post-Graduate division is carried out according to the provision of the educational program for a Research-engineer and the fixed order of conducting final testing of post-graduate students and awarding a qualification degree, taking into account the established requirements to the realization of the curriculum and not less than 1/3 of the working plan of the Ph. D. dissertation for awarding the qualification degree of a Research-engineer and not less than 2/3 for getting the right of the third year of study, as well as the results of the State final examination on the specialty.

Based on the factual material concerning the realization of the dissertation work, considering the opinion of the scientific supervisor and the expert, appointed from the members of the council of the dissertations defence, the corresponding department introduces its decisions concerning the realization of the work and a suggestion for testing, awarding a qualification degree of a Research-



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engineer and awarding the right of the third year of study at the post-graduate division after a detailed consideration.

The State qualification committee, authorized by the RA Ministry of Education and Science, makes a decision on awarding a qualification degree (diploma) of a Research-engineer and giving the right to be trained for the third year at the post-graduate division, taking into account the State examination on the specialty and examination on the degree of fulfilment of the Ph. D. dissertation. However: The Post-graduate students who aren't awarded the qualification degree a (diploma) of a Research-engineer, but have carried out their duties according to the curriculum, can later pretend to this degree on condition of meeting the requirements set for the research part;

The Post-graduate students who are awarded the qualification degree a (diploma) of a Research-engineer, but aren't awarded the right to be trained for the third year at the post-graduate division can later pretend to the defence of dissertation on the general basis.

- *“Transport Planning”, „Investment Appraisal”, „Multimodal Transport“ modules*

Based on the information available the modules are not covered in the lecture materials.

Can you please chek if any Erasmus activities within the region or the EU are present in these universities?

- *Erasmus Activities*

University participate in Erasmus Mundus programme; External Cooperation Window for Georgia, Armenia and Azerbaijan (Lot 6). However, based on the information available priority thematic fields for mobility do not include transport or transport related studies.

3.2.2 Bologna Process

- *Participation of the University in the Bologna Process*

SEUA is actively participating in the implementation of the requirements which conform to the Bologna Declaration.

- *Structure of the curricula*

The curriculum is modular structured and transparent.

- *Implementation of a credit point system*

The assessment of the student achievements performed by means of the credit system.



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Table 2: Levels of Performance

Level of knowledge	Grade	Mark	Rating
Excellent	A+	4,0	95-100
	A	4,0	87-94
	A-	3,7	81-86
Good	B+	3,3	75-80
	B	3,0	67-74
	B-	2,7	61-66
Satisfactory	C+	2,3	55-60
	C	2,0	46-54
	C-	1,7	40-45
Failure	D	1,0	21-39
	F	0	0-20
Incomplete	I	-	-
Pass	S	-	>=40
Fail	U	-	<40

Source: "The Experience of SEUA in Credit System Implementation", Prof. Ruben Aghashyan, State Engineering University of Armenia, Vice-Rector, <http://www.seua.am/eng/seminar/Program.htm>

3.2.3 Didactics

- *Workload*

The workload of one educational year in academic hours:

(52 weeks - 12 weeks of holiday) x 54 academic hours = 2106 academic hours

The workload of one educational year in credit points:

2160 academic hours / 36 academic hours = 60 credit points (ECTS standard)

The workload of one educational year in credit points:

(16 academic weeks + 4 examination weeks) x 54 academic hours / 36 academic hours = 30 credit points (or 20 weeks x 1,5 credit point)

Research Program:

2 years x 60 credit points = 120 credit points

2 years x 1620 academic hours = 3240 academic hours or: 4320 time hours

Master Degree:

2 years x 60 credit points = 120 credit points

2 years x 1620 academic hours = 3240 academic hours or: 4320 time hours

Bachelor Degree:

4 years x 60 credit points = 240 credit points

4 years x 1620 academic hours = 6480 academic hours or: 8640 time hours

- *Presence of theoretical and practical elements*

Theoretical elements: Classes, lectures, self-study



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Practical elements: Workshops, case studies, practical trainings, lab-work

Faculty Development Centre promotes faculty members' professional development, improves their pedagogical skills, prepares appropriate methodical and teaching materials as well as participates in the New Educational Technologies development and their introduction in the teaching and learning.

Employees of Faculty Development Centre have implemented more than 20 educational projects aimed at the Online Teaching software and methodical materials development, Web-sites design, IT training facilities building and appropriate teaching materials preparation, training services provision in range from end-users to IT professionals, etc.³

³ <http://www.seua.am/eng/glance.html>



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3.3 Azerbaijan Technical University (AzTU)

The University specialized in engineering. It has 9 schools and 54 departments, 884 faculty members and approximately 6500 students.

3.3.1 Degrees, faculties and curricula

- *Academic programs offered by the University are as follows:*
 - Bachelor degree
 - Master degree
- *University faculties and curricula*

Faculties:

- Transport
- Electrical Engineering and Energetics
- Radio Engineering and Communication
- Metallurgy
- Machine-building
- Automation and Computing Machines
- Technological Machines
- Engineering Business and Management

There are 70 specialties in 26 directions that cover different fields of science and technique. About 600 teaching staff, 70 doctors of science, professors, about 400 candidates of science are engaged in teaching and research activity with 46 chairs of the University.

Faculty of Transport: The faculty includes 6 chairs:

- Organisation of carriages and management of automobile transport
- Exploitation of railway transport
- Strength of materials
- Theoretical mechanics
- Automobile transport means
- Internal combustion engines and auto tractors

There are 1028 bachelor and 58 master students in the faculty. The bachelor students are trained under following direction:

- Land transport facilities and exploitation of the transport
- The railway transport and economy



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These directions are divided into the following specialities:

- Automobile and Tractor
- Tractors
- Organisation of the transportation and operation (by automobile and railway transport)
- Organisation of the traffic of the travelling
- Economy of the traffic of the locomotive
- Carriage and economy of the carriage
- Repair and service of transport facilities

The master students are trained under the following directions:

- Land transport facilities, exploitation of land transport and air transport
- Railway transport and economy

These directions are divided into the following specialities:

- Automobile and tractor
 - Tractors
 - Organisation of the transportation and operation (by automobile and railway transport)
 - Organisation of the traffic of the travelling
 - Economy of the traffic of the locomotive
 - Carriage and economy of the carriage
 - Repair and service of transport facilities
-
- *“Transport Planning”, „Investment Appraisal“, „Multimodal Transport“ modules*

The modules “Transport Planning” and „Investment Appraisal” are not included in the lecture material. However, based on the information gained from project national seminar in Baku 16.02.2010-19.02.2010 “Multimodal Transport” module is included in the new Bachelor curricula.

- *Erasmus Activities*

University participate in Erasmus Mundus programme; External Cooperation Window for Georgia, Armenia and Azerbaijan (Lot 6). However, based on the information available priority thematic fields for mobility do not include transport or transport related studies.

3.3.2 Bologna Process

- *Participation of the University in the Bologna Process*

The University has joined the Bologna Process.

- *Structure of the curricula*

Information is not available.

- *Implementation of a credit point system*

Information is not available.



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3.3.3 Didactics

- *Workload*

Information is not available.

- *Presence of theoretical and practical elements*

Theoretical elements: Classes, lectures, self-study

Practical elements: Workshops, case studies, practical trainings, lab-work, course projects

The relation of theory and practice amounts to about 2/3 theories and to 1/3 practice; detailed information is not available.

Can we have one more for AZ? IT is a very important country for the region!

3.4 Azerbaijan National Aviation Academy (NAA)

NAA of "Azerbaijan Airlines" Closed Stock Company is the first and the only educational institution that trains specialists in all fields of Civil Aviation of Azerbaijan. It was founded in 1992. NAA owns four well-equipped training buildings with specialized classrooms for selected aircrafts (Airbus, Boeing, ATR, and Cessna), information Computing Centre, special laboratories, flight simulators centre, students' dormitory, sport centre and sheltered pool.

To supply Civil Aviation of Azerbaijan with qualified specialists Postgraduate Studies Department and Special Doctor Science Council have been established. NAA was included to ICAO Directory of Educational Centers, certified as a higher educational institution, admitted to Russia Educational and Methodological Association and certified by Administration of Civil Aviation, Certifying Commission of Ministry of Education of Azerbaijan Republic. The academy was rewarded "European Quality" for tendency to reach European quality in its activities in Oxford Summit, in March 2008.

Today NAA seeks the policy to apply European education standards to all directions of its activity in civil aviation. The academy wants its staff and students to reach 4th level aviation English standards of ICAO, to fight against pollution, and other ecological problems, to apply modern education standards to the teaching process; to develop telecommunication system such as distance learning, e-library and etc.

3.4.1 Degrees, faculties and curricula

- *Academic programs offered by the University are as follows:*

- Bachelor degree - 4 years
- Engineer - 5 years
- PhD

- *University faculties and curricula*

Faculties:

- Flight operations and Maintenance of Aircraft
- Air Transport Organization
- Economics and Law
- Aerospace and Centre of Aviation Personnel Training



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About 2600 students are trained on 23 specialties in two languages; Azerbaijan and Russian (it is planned to pass to English).

- *“Transport Planning”, „Investment Appraisal”, „Multimodal Transport“ modules*
Based on the information available the modules are not covered.
Aviation academy introduced bachelor study in Logistics Management.

Faculty of “Air Transport Organisation” includes the following disciplines:

- Logistics and Transport systems
- Transport logistics
- Warehouse logistics
- Transport economics
- Logistics flow: financial
- Logistics: external activities

3.4.2 Bologna Process

- *Participation of the University in the Bologna Process*

Academy has joined Bologna Process

- *Structure of the curricula*

Information is not available

- *Implementation of a credit point system*

Information is not available

3.4.3 Didactics

- *Workload*

Information is not available

- *Presence of theoretical and practical elements*

Theoretical elements: Classes, lectures, self-study

Practical elements: Workshops, case studies, practical trainings, lab-work, course projects.

Information is not available

Comments: NAA intends to strengthen the cooperation and expand future collaborations for the realisation of standards and guidelines in the European Higher Education area in the following forms of cooperation:

- a) Realization of program for exchanging students, academic and scientific staff.
- b) Conducting joint scientific research works and projects.
- c) Cooperation of leading scientific staff of both parties, for scientific lecturing and carrying out mutual experimental works.



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- d) Publication of the results of mutual scientific investigation in the prestigious international journals.
- e) The summer terms and summer scientific seminars should be widely used.
- f) To take into account the effectiveness of the internal quality assurance of education process with respect to the Bologna Conference in the Higher Education area.



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3.5 Gerogian Technical University (GTU)

3.5.1 Degrees, faculties and curricula

- *Academic programs offered by the University are as follows:*
 - Certified Specialist
 - Bachelor degree
 - Master degree
 - PhD degree

- *University faculties and curricula*
 - Faculty of Civil Engineering
 - Faculty of Power Engineering and Telecommunication
 - Faculty of Mining and Geology
 - Faculty of Chemical Technology and Metallurgy
 - Faculty of Architecture, Urbanistics and Design
 - Faculty of Informatics and Control Systems
 - Faculty of Transportation and Machine-Building
 - Humanitarian-Social Faculty

The Georgian University of Engineering Sciences is transport related higher educational institute. They offer the broadest training in transport subjects and are licensed for specialisation on railway and automobile operation as well as for construction in transport. There are 11 faculties in the structure of the University. One of them is the Faculty of Transportation and machine-building with its transport department offering the following⁴:

- Transport construction
 - Organisation and management of transportation
 - Management of road transport
 - Transport Logistics
 - Naval transports and Transportation Equipments
 - Automobile Transportation
 - Machine Parts and Hoist Mechanism
 - Building Machines and Mechanical Equipments
 - Carriage Building, Carriage Farming, Managing of Transport Process of Railway Transports
 - Railroad Construction and Maintenance
 - Electric Transports
 - Bridges and Tunnels
 - Automobile Roads and Aerodromes
 - Automation and Communication of Rail Transport
-
- *“Transport Planning“, „Investment Appraisal“, „Multimodal Transport“ modules*

Based on the information available the modules are not covered in the lecture materials.

⁴ www.gtu.ge



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- *Erasmus Activities*

University participate in Erasmus Mundus programme; External Cooperation Window for Georgia, Armenia and Azerbaijan (Lot 6). However, based on the information available priority thematic fields for mobility do not include transport or transport related studies.

3.5.2 Bologna Process

- *Participation of the University in the Bologna Process*

Information is not available.

- *Structure of the curricula*

Information is not available.

- *Implementation of a credit point system*

GTU applies the European ECTS system.
Erasmus?

3.5.3 Didactics

- *Workload*

Information is not available.

- *Presence of theoretical and practical elements*

Theoretical elements: Classes, lectures, self-study

Practical elements: Workshops, case studies, practical trainings, lab-work, course projects

The relation of theory and practice amounts to about 50 % theory and to 50 % practice; none detailed information is available.

GTU expanded over the recent years and includes now also the "Caucasus Business School" (a joint project of GTU, Tbilisi State University and Georgia State University (Atlanta, Georgia, USA)), German Studies faculty, a Franco-Georgian Studies faculty and a "Cisco Networking Academy". GTU has thirteen branch institutes all over the country⁵.

⁵ Report „Strengthening of Transport Training Capacities for NIS Countries“



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3.6 Eurasian National University named after L.N. Gumilyov (ENU), Kazakhstan

It was established in 1996 by the Decree of the RK President Nazarbayev N.A.

The ENU is a Member of the European Association of Higher Education Establishments, the International Universities' Association, the Eurasian Universities' Association, the International Science Academy of Higher Education Institution, the Association of International Research of the CIS and Baltic countries, it has steady international ties with such higher education establishments and scientific centres of the far and near abroad as the Royal Academy of Doctors of Science, Navarro University (Spain), Lomonosov MSU, Oldenburg University (Germany), California University, Nebraska-Lincoln University (USA), Wollongong University (Australia), Jawaharlal Nehru University, Klingendal Institute of International Relations (the Netherlands), University of Oil and Gas, Walachia University (Romania), Liege University (Belgium), Institute of Civilization and Oriental languages (INALKO) (Paris, France), Seoul University, Bologna University (Italy), St. Petersburg State University, Moscow State Linguistic University, Moscow State University of International Relations, Shevchenko Kiev National University, Belarus State University, Vilnius Technical University named after Gediminas (Lithuania) and others. The University has concluded agreements and treaties with more than 100 higher education institutions of Europe, Asia and America with the view of promoting the international cooperation.

3.6.1 Degrees, faculties and curricula

- *Academic programs offered by the University are as follows:*
 - Bachelor degree
 - Specialist diploma
 - Master degree
 - PhD degree

- *University faculties and curricula*

During recent years the University has beneficially modernized its structure. At present there are 8 major profile faculties in its content, the amount of current students: 8431 studying on 59 Bachelor's programmes, 36 Master's programmes, and 13 doctoral programmes. Nowadays there are 8431 students, 5838 of whom are the state scholarship-holders. 1303 students are owners of "Altyn Belgi" medal, 131 students are winners of the national Olympiads on different subjects and research projects. More than 2000 students are owners of the school-leaving certificate of honour. ENU is by right major scientific and educational centre of Kazakhstan. The ENU has highly qualified academic staff: in 53 Departments there are 1180 lecturers, including more than 156 doctors of science, professors, 432 candidates of science and associate professors, as well as 57 doctors of science and professors of foreign higher education institutions, involved in the capacity of consultants on Master's and PhD programs.



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Faculties:

- Architecture and Construction
- Philology
- Economics
- Physics and Technical Sciences
- International Relations
- Natural Sciences
- Social Sciences
- Law

Magistracy is the main and principle link in the integrated three-stage model of staff training with high professional education (Bachelor- Magistracy- PhD study), based on accumulated credit educational system.

Stuff training at magistracy is conducted on scientific-pedagogical trend lasting 2 years, approximate to scientific-research and pedagogical forms of professional activity. Detailed information on magistracy is provided in Annex 2 "Postgraduate Education Magistracy".

The PhD program is implemented under the curricula worked out by Kazakhstani and foreign research advisors that include a range of compulsory fundamental and major courses.

Doctoral candidate must get not less than 60 credits on the following aspects of academic and research activities:

- Academic courses (30 credits)
- Abroad training courses (at least 10 credits)
- Research work (16 credits)
- State attestation (4 credits)
- The lectures on major courses are held by the professors from foreign academies.

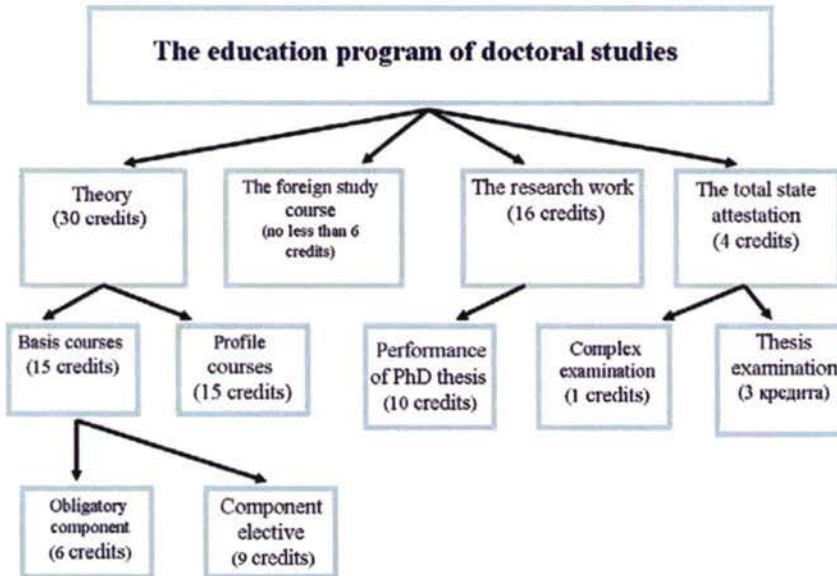
The diploma of Doctor of Philosophy is granted upon completion of the doctoral program and successful dissertation defense.



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Table 3: Structure of the education program of doctoral studies



Source: <http://www.enu.kz/education/masters-phd-degrees/phd>

- “Transport Planning”, „Investment Appraisal“, „Multimodal Transport“ modules

Based on the information available the modules are not covered in the lecture materials.

- Erasmus Activities

University participate in Erasmus Mundus programme; External Cooperation Window for Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan (Lot 9). The quantity of European university-partners of ENU amounts to 17 universities.

“Erasmus Mundus”2007-2013.	“Erasmus Mundus- External Cooperation Window Lot 9” 2009-2013.
Technological University of Eindhoven (Holland)	Erasmushogeschool Brussel (Belgium)
Lund University (Sweden)	University of Chemical Technology and Metallurgy (Bulgaria)
METU (Turkey)	Masaryk University (Czech Republic)
Lyublyana University (Slovenia)	University of Lapland (Finland)
Free University of Berlin (Germany)	Otto-von-Guericke University Magdeburg (Germany)
Gumbold University (Germany)	Vilnius University (Lithuania)
Deusto University (Spain)	Warsaw University of Life Sciences (Poland)
Algarve University (Portugal)	Universidade de Santia de Compostela (Spain)
	Anadolu University (Turkey)

13 people studied by the program “Erasmus Mundus” 2007-2013 years in 2009.

5 places were given to Kazakhstan over the program “Erasmus Mundus- External Cooperation Window Lot 9” and ENU received 4 of them.



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However, based on the information available priority thematic fields for mobility do not include transport or transport related studies.

3.6.2 Bologna Process

- *Participation of the University in the Bologna Process*
Information is not available.

- *Structure of the curricula*

Information is not available.

- *Implementation of a credit point system*

A credit point system has been implemented.

3.6.3 Didactics

- *Workload*

Information is not available.

- *Presence of theoretical and practical elements*

Theoretical elements: Classes, lectures, self-study

Practical elements: Workshops, case studies, practical trainings, lab-work, course projects

15 various scientific institutes function within the University such as scientific centres, research institutions, and laboratories. On the initiative of the head of state Kazakhstani branch of M. V. Lomonossov Moscow State University was established on basis of ENU.

The modern education technologies are applied in the academic process: new computer classes with access to the Internet, language laboratories, lecture rooms, interactive boards, equipped with audio – visual appliances.

The ENU has research library “Otyrar Kitapkhanasy” with more than 1.5 mln. books, publishing centre, unique research centres and laboratories.

ENU cooperates with different international foundations and organisations: “Tempus” EU programs, “Erasmus Mundus”, Educational centre of Master degree programs EUROPÆUM, British Council, International Research and Exchange Council (IREX), German academic exchange service DAAD, United States Agency of International Development (USAID).



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3.7 Kazakh Academy of Transport and Communications (KazATK)

Kazakh Academy of transport and Communications after Tynyshpaev is one of the largest technical Institutions of Higher Education (IHE) in the country.

3.7.1 Degrees, faculties and curricula

- *Academic programs offered by the Academy*
 - Bachelor degree
 - Specialist diploma
 - Master degree
 - PhD degree

- *Academy faculties and curricula*
 - Faculty of Automation and Telecommunications
 - Humanitarian Faculty and of Natural and Social Sciences
 - Faculty of Organization of Transportation and Logistics
 - Faculty of Construction
 - Faculty of Transport equipment
 - Faculty of Economics

The University offers training programs in 50 specialities. There are 25 teaching departments. According to the reforms of higher vocational education, which are carrying out in Kazakhstan now, the strategy for the Academy development is created; the strategy provides the implementation of “Bachelors – Masters- Doctorates” educational system, which is new for Kazakh IHEs. The implementation of this system means, the use of new learning technologies and the implementation of the credit points system.

- *“Transport Planning”, „Investment Appraisal“, „Multimodal Transport“ modules*

According to the Resolution No. 151 dated 29th May 2009 the material on intermodal and multimodal transport is to be implemented by the teaching department “Transport Logistics”.⁶
At present none of the aforementioned modules is covered in the lecture materials.

3.7.2 Bologna Process

- *Participation of the University in the Bologna Process*

The Academy has joined the Bologna Process.

- *Structure of the curricula*

Information is not available.

- *Implementation of a credit point system*

A credit point system has been implemented.

⁶ http://kazatk.kz/index.php?option=com_content&task=view&id=93&Itemid=115



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3.7.3 Didactics

- *Workload*

Information is not available.

- *Presence of theoretical and practical elements*

Theoretical elements: Classes, lectures, self-study

Practical elements: Workshops, case studies, practical trainings, lab-work, course projects.



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3.8 Kyrgyz State Technical University named after I. Razzakov

3.8.1 Degrees, faculties and curricula

- *Academic programs offered by the University*
 - Bachelor degree
 - Specialist diploma
 - Master degree
 - PhD degree
- *University faculties and curricula*

The University is a leading technical academy in Kyrgyzstan. Training of students is carried out according to the curricula with the focus on preparation of highly skilled experts, meeting the requirements of labour market. The University offers a degree in 57 specialties⁷.

Faculties:

- Informational Technologies
- Faculty of Power Engineering
- Technological Faculty
- Transport and Machine-construction Faculty
- Kyrgyz-German Technical Faculty
- Moscow Power Energy Institute (TU) - KSTU Faculty

Institutes:

- Institute of Management and Business
- Institute of Mining and Mining Technologies
- Tokmoks Technical Institute
- Distance Learning Centre
- Department of Vocational Education
- „Transport Planning“, „Investment Appraisal“, „Multimodal Transport“ modules

Based on the information available the modules are not covered in the lecture materials.

- *Erasmus Activities*

University has close cooperation with international funds, programs, associations: DAAD, Soros Foundation, UNESCO, International Student Exchange Association, European Association on international education; takes a part in projects: Eurasia, Tempus-TACIS, INTAS, ISTC, Sabre Foundation and others.

At present university:

- *realizes project “ASIA-EUROPE Credit Transfer in Virtual and Distance Education” under program “ERASMUS MUNDUS”*
- *and will take a part in three projects on Program “TEMPUS” (2nd CALL):*

⁷ <http://ktu.aknet.kg/>



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- 158677-TEMPUS-1-2009-1-DE-TEMPUS-JPCR "Higher Education Initiative for Informatics in Central Asia";
- 159025-TEMPUS-1-2009-1-FR-TEMPUS-JPCR "Reseau Europe-Russie-Asie Centrale de Masters Informatique Seconde Compétence";
- 158982-TEMPUS-1-2009-1-ES-TEMPUS-JPCR "Towards Sustainable Water Resources Management in Central Asia"

3.8.2 Bologna Process

- *Participation of the University in the Bologna Process*

Bologna Process principles has been successfully realized

- *Structure of the curricula*

The study structure is clear and transparent, modular structured, comprises compulsory and some optional components, training and internship.

- *Implementation of a credit point system*

Information is not available.

3.8.3 Didactics

- *Workload*

The academic year is divided into two semesters. The University offers a variety of teaching, working methods and evaluation.

- *Presence of theoretical and practical elements*

Theoretical elements: Classes, lectures, self-study

Practical elements: Workshops, case studies, practical trainings, lab-work.

Based on the working learning plan for students studying towards Specialist diploma in "Industrial and Transport Logistics" and "Automotive Transport Logistics" the below estimations have been made in regards to the specialized disciplines (21 disciplines, semester 5-9) as follows:

Median value of

- total hours per discipline	120
- total hours of classes per discipline	59
- total hours of lectures per discipline	34
- total hours of practical trainings per discipline	17
- total hours of seminars per discipline	8
- total hours of self-studies per discipline	61

Self-study: on average (mean value) 47% of the total hours per discipline.

Total hours of classes per discipline comprise total hours of lectures, practical trainings and of seminars.



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3.9 Kyrgyz State Technical University of Construction, Transport and Architecture named after N. Isanov

The university as a leading educational institution is a dynamically developing facility, which has a modern technical base, united and highly qualified academic staff.

The university, continuing long-term national traditions in the preparation of the technical and engineering specialists in the field of construction and architecture, brings an essential contribution to the resolution of social and economic tasks of the country.

Being an active member of the International Association of Higher Institutions of Construction within the CIS, it carries out preparation of experts in accordance with the performance section of the five-sided intergovernmental contract on the Customs' Union and common economic space. The training of diploma specialists in 60 specialties is being conducted by combined efforts of six institutes and four faculties in the 44 departments in 18 directions. There are functioning doctoral and candidate dissertational councils in six specialties.

There more than 500 teachers and 11000 students, including master and post-graduate, in the university. There are 7000 full time and part time 4000 students.

3.9.1 Degrees, faculties and curricula

- *Academic programs offered by the University*
 - Bachelor degree
 - Specialist diploma
 - Master degree
 - PhD degree

- *University faculties and curricula*

INSTITUTE OF CONSTRUCTION, ECONOMICS AND MANAGEMENT

- Concrete structures
- Metallic and polymeric structures
- Manufacture and testing of building materials and articles
- Technology of design and construction of seismic resistant buildings
- Geodesy and geoinformatics
- Construction of railways
- Highways, bridges and tunnels
- Hydro technical construction
- World economy
- Accounting and audit
- Economics and management of the enterprise
- Management



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INSTITUTE OF TRANSPORTATION AND COMMUNICATION

- Operation of transport facilities
- Traffic engineering
- Organization and management in transport
- Lifting and transport, construction and road machines and equipment
- Customs affairs in transport

INSTITUTE OF ARCHITECTURE AND DESIGN

- Architecture
- Urban planning
- Design of architectural environment
- Restoration of architectural heritage
- Drawing and monumental painting
- Art designing of dress
- Arts and crafts
- Descriptive geometry and drawing
- Philosophy and socio-political sciences

INSTITUTE OF NEW INFORMATION TECHNOLOGY

Information systems and technologies

- Applied mathematics and computer science
- Applied information science
- Safety of information systems
- Linguistics and new information technology
- Mechanics
- Physics
- Physical training

INSTITUTE OF INNOVATION PROFESSIONS

- Assessment of management and tourism
- Design
- Fire Safety
- Software engineering and computer science
- Radio electronics

INSTITUTE OF ECOLOGY AND ENERGY SAVING

- Heat, gas supply and ventilation
- Environment protection and rational use of natural resources
- Water supply and sewerage
- Chemistry and safety of vital activity
- Kyrgyz language
- Russian language
- Foreign languages



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- „Transport Planning“, „Investment Appraisal“, „Multimodal Transport“ modules

Based on the information available the modules are not covered in the lecture materials.

- *Erasmus Activities*

The university is the main local coordinator and executor of international education projects by TEMPUS TACIS, DAAD, EEiF and CRDF. The total sum of realizing educational grants is about 7 mln. USD. The university is a member of International Association of Construction High Schools CIS, International Association of Architectural Schools, European Community of Architecture School, and Eurasia-Pacific Uninet.

3.9.2 Bologna process

- *Participation of the University in the Bologna Process*

Information is not available.

- *Structure of the curricula*

Information is not available.

- *Implementation of a credit point system*

Information is not available.

3.9.3 Didactics

- *Workload*

The academic year is divided into two semesters. The University offers a variety of teaching, working methods and evaluation.

- *Presence of theoretical and practical elements*

Theoretical elements: Classes, lectures, self-study

Practical elements: Workshops, case studies, practical trainings, lab-work.

Students of the University have practical study at advanced enterprises and construction companies, at leading design organisations and scientific research institutes. The main idea of practical tasks in the formation of a modern specialist and future leader is training of professionals who is able to solve scientific-technical and other tasks of national economy, therefore self-education of student is very important⁸.

⁸ http://www.ksucta.kg/article/inst_dep/1152563594/



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3.10 National Transport University of Ukraine

The National Transport University is one of the leading educational scientific establishments.

3.10.1 Degrees, faculties and curricula

- *Academic programs offered by the University*

- Bachelor degree (Bachelor of Science)
- Specialist diploma
- Master degree (Master of Science)
- PhD degree

- *University faculties and curricula*

There are 4 faculties at the University:

- General Engineering
- Motor-mechanical
- Road construction
- Transport Management

Today 4 faculties of the University train 6 000 students. Four institutes work in the structure of the University. They are the Institute of correspondence and distance learning, the Research institute of transport and construction technologies and the Institute of pre-University training and international cooperation and the Institute of transport economics and business, which carry out further training of almost 2,500 specialists in 24 areas every year. The University aims to educate specialists to the higher standards enabling them to work at the cutting edge of highly effective transport practice. The University curricula are designed to train specialists.

A department of further training was also opened on the following specialism:

- Market Economy
- Enterprise Management
- Taxes and Taxation

New departments of the faculty of Transport Management:

- Enterprise Management
- Transport Systems and Marketing
- Economics and Informatics
- Organisation of Enterprises
- Industrial Systems and Service on Transport
- Transport Law
- Systems Analysis and Logistics
- Constitutional and Administrative Law



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Students can choose between different professionally oriented subjects such as: microeconomics, macroeconomics, management of foreign economic activity, project analysis, banks, audit and marketing.

Emphasis is placed on postgraduate education. Postgraduate course and doctorate course make it possible to prepare highly qualified specialists. For the last 5 years about 100 specialists have graduated from postgraduate course and 12 specialists wrote doctorate dissertations. The University has 4 specialized Academic Councils on defending Doctors' and Candidates' dissertations⁹.

- „Transport Planning“, „Investment Appraisal“, „Multimodal Transport“ modules

Based on the information available the modules are not covered in the lecture materials.

- *Erasmus Activities*

Information is not available.

3.10.2 Bologna process

- *Participation of the University in the Bologna Process*

Information is not available.

- *Structure of the curricula*

The study structure is clear and transparent, modular structured, comprises compulsory and optional components, training and internship.

- *Implementation of a credit point system*

Information is not available.

3.10.3 Didactics

- *Workload*

The academic year is divided into two semesters. The University offers a variety of teaching, working methods and evaluation.

Bachelor degree	4,5 years
Specialist diploma	1,5 years
Master degree	1,5 years

- *Presence of theoretical and practical elements*

Theoretical elements: Classes, lectures, self-study

Practical elements: Workshops, case studies, practical trainings, lab-work.

⁹ <http://www.ntu.kar.net/ukraine/other/about-eng.htm>



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Based on the working learning plan for students studying towards the Bachelor degree the below estimations have been made in regards to the specialized disciplines as follows:

Median value of

- total hours per discipline	135
- total hours of classes per discipline	54 (lectures + practical trainings)
- total hours of lectures per discipline	36
- total hours of practical trainings per discipline	18
- total hours of self-studies per discipline	81

Self-study: on average (mean value) 56% of the total hours per discipline.

Minimum standard to be included in the total hours of the discipline in accordance with the requirements of the Ministry of Education:

Median value of

- total hours of lectures per discipline	31
- total hours of practical trainings per discipline	22

Based on the working learning plan for students studying towards the Specialist diploma and Master degree the below estimations have been made in regards to the specialized disciplines as follows:

Median value of

- total hours per discipline	76,5
- total hours of classes per discipline	45
- total hours of lectures per discipline	28
- total hours of practical trainings per discipline	14
- total hours of self-studies per discipline	31,5

Self-study: on average (mean value) 41% of the total hours per discipline.

Minimum standard to be included in the total hours of the discipline in accordance with the requirements of the Ministry of Education:

Median value of

- total hours of lectures per discipline	28
- total hours of practical trainings per discipline	14

3.11 National Aviation University, Ukraine

It is the leading university for training specialists in civil aviation. Year of first accreditation is 1933. The National Aviation University provides fundamental professional and practical training at the level of Bachelor and Master. The period of training is 4 years for Bachelors degree and 1-1,5 years for Master degree. Language of study is Ukrainian, Russian and English¹⁰.

¹⁰ <http://dmz.nau.edu.ua/eng/university.php>



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3.11.1 Degrees, faculties and curricula

- *Academic programs offered by the University*
 - Certificate/Diploma
 - Bachelor degree
 - Specialist diploma
 - Master degree
 - PhD degree

- *University faculties and curricula*
 - Aircraft Faculty
 - Mechanics and Energetic Faculty
 - Aerospace Control Systems Faculty
 - Faculty of Electronics
 - Faculty of Information Technologies
 - Telecommunication and Security of Information Faculty
 - Computer Science Faculty
 - Computer Systems Faculty
 - Airport Design Faculty
 - Architecture and Design Faculty
 - Environment Protection Faculty
 - Economics and Business Faculty
 - Air Transport Technologies Faculty
 - Management and Logistics Faculty
 - Faculty of International Information and Law
 - International Economic Relations Faculty
 - Air and Space Law Institute
 - Psychology and Sociology Faculty
 - Faculty of Linguistics
 - Foreign Students Faculty and Military Training Faculty;

- *„Transport Planning“, „Investment Appraisal“, „Multimodal Transport“ modules*

Institute of Economics and Management, Faculty: Management and Logistics; teaching department: Logistics.

Direction: Management

Specialty: Logistics

Discipline: Supply Chain Management

Qualification level: Specialist diploma, Master degree

“Multimodal Transport”: the module is covered in the lecturing material of the Module 5 „Integrated Transportation Management“ under the heading „Multimodal transportation as the main factor in efficiency increase of supply chain organisation “. ¹¹

Institute of Economics and Management, Faculty: Management and Logistics; teaching department: Logistics.

Direction: Management

¹¹ Ilyenk Oksana Viktorovna Summary report on Bachelor degree program “Supply Chain Management”



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Specialty: Logistics

Discipline: Geologistics

Qualification level: Bachelor's degree

"Transport Planning": the module is covered in the lecturing material/practical trainings of the Module 2 "Geospatial Logistics Measurement" under the heading „Transport Planning and Forecast; Transport Geography IATA".¹²

"Multimodal Transport": the module is covered in the lecturing material and in the practical trainings/seminars of the Module 2 "Geospatial Logistics Measurement" under the heading "Intermodal Transport Systems" and "Intermodal transport systems and their role in the process of economic integration and globalisation" respectively.¹³

Institute of Economics and Management, Faculty: Management and Logistics; teaching department: Logistics.

Direction: Management

Specialty: Logistics

Discipline: Functional Logistics

Qualification level: Bachelor's degree

"Multimodal Transport": the module is covered in the lecturing material and in the practical trainings/seminars of the Module 7 "Cargo Transportation Logistics" under the heading "Modern cargo transportation systems".¹⁴

Institute of Economics and Management; Faculty: Management and Logistics; teaching department: Logistics

Direction: Management

Specialty: Logistics

Discipline: Logistics Projects Management

Qualification level: Bachelor's degree

"Investment Appraisal": the lecturing material covers investment appraisal of logistics projects.¹⁵

Institute of Economics and Management; Faculty: Management and Logistics; teaching department: Logistics

Direction: Management

Specialty: Logistics

Discipline: Transportation Organisation and Transport (Air) Management

Qualification level: Bachelor's degree

"Transport Planning", "Investment Appraisal": the modules are partly covered in the lecturing material of the Module 2 "Business cooperation in the international airspace" under the heading "Organisation of market research on air transportation market" and in the practical trainings/seminars as follows:

- Potential and current analysis of demand for air transportation;
- Analysis of passenger and cargo flows;

¹² Katernaya Olga Konstantinovna Summary report on Bachelor degree program "Geologistics"

¹³ Katernaya Olga Konstantinovna Summary report on Bachelor degree program "Geologistics"

¹⁴ Katernaya Olga Konstantinovna Summary report on Bachelor degree program "Functional Logistics"

¹⁵ Grigorak Mariya Uryevna Summary report on Bachelor degree program "Logistics Projects Management"



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- Planning of new air destinations;
- Price elasticity of demand;
- Cost-Benefit analysis in relation to the new air destinations for the air carriers¹⁶

- *Erasmus Activities*

Erasmus Mundus External Cooperation Window for Belarus, Moldova and Ukraine (Lot 7)

University participates in the following Programmes:

- Seventh Framework Programme (FP7)
- DAAD
- European Master in Intercultural Education
- The Lane Kirkland Scholarship Program
- Fulbright

3.11.2 Bologna process

- *Participation of the University in the Bologna Process*

The University has joined the Bologna Convention.

- *Structure of the curricula*

The study structure is clear and transparent, modular structured, comprises compulsory and optional components, training and internship.

- *Implementation of a credit point system*

The assessment of the student achievements performed by means of the credit system; ECTS has been also implemented.

3.11.3 Didactics

- *Workload*

The academic year is divided into two semesters. The University offers a variety of teaching, working methods and evaluation. Some courses have compulsory assignments and attendance, while others have a more free structure.

Presence of theoretical and practical elements

Theoretical elements: Classes, lectures, self-study

Practical elements: Workshops, case studies, practical trainings, lab-work.

Based on the working learning plan for students studying towards the Bachelor degree the below estimations have been made in regards to the specialized disciplines as follows:

¹⁶ Karpun Olga Vasilyevna Summary report on Bachelor degree program "Transportation Organisation and Transport (Air Management)".



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Median value of

- total hours per discipline	162
- total hours of classes per discipline	68 (lectures + practical trainings)
- total hours of lectures per discipline	34
- total hours of practical trainings per discipline	34
- total hours of self-studies per discipline	94

Self-study: on average (mean value) 54% of the total hours per discipline.

Minimum standard to be included in the total hours of the discipline in accordance with the requirements of the Ministry of Education:

Median value of

- total hours of lectures per discipline	34
- total hours of practical trainings per discipline	34

Based on the working learning plan for students studying towards the Specialist diploma and Master degree the below estimations have been made in regards to the specialized disciplines as follows:

Median value of

- total hours per discipline	81
- total hours of classes per discipline	42,5
- total hours of lectures per discipline	25,5
- total hours of practical trainings per discipline	17
- total hours of self-studies per discipline	38

Self-study: on average (mean value) 48% of the total hours per discipline.

Minimum standard to be included in the total hours of the discipline in accordance with the requirements of the Ministry of Education:

Median value of

- total hours of lectures per discipline	34
- total hours of practical trainings per discipline	17

Detailed information on Higher Education in Ukraine is provided in Annex 1: "Higher Education in Ukraine; Professional Higher Education Qualifications".



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3.12 Tashkent Automotive Road Institute (TARI), Uzbekistan

Tashkent Automotive Road Institute TARI is the only university in Central Asia, where undergraduate and graduate programs in the areas of automotive and road construction engineering are offered. The first stage of the University level education leads to the Bachelor degree. Talented students can continue their education for another 2 years. This second stage of the University level education leads to the Master degree.

3.12.1 Degrees, faculties and curricula

- *Academic programs offered by the Institute*
 - Bachelor degree
 - Specialist diploma
 - Master degree
 - PhD degree
- *University faculties and curricula*

There are 4 faculties at the Institute:

- Automobile Transport
- Automobile Construction
- The Road Construction
- Economics and Management

The graduates of the second stage receive the Master degree in the following specialties:

- Transportation: organization and management
- Road safety organization
- Automobiles and Automotive Transport
- Maintenance and testing of internal combustion engines
- Auto and tractor electric equipment

TARI is a main and central university in preparation of curricula for the technical subjects of the nine technical and polytechnic universities located in Uzbekistan.

Bachelor degree: 11 directions

Master degree: 17 specialties

Doctorate degree: 2 directions

TARI cooperates with Uzbekistan Auto-manufacturing Association (UzAutosanoat), Uzbekistan Automotive Road Concern, Oil and Gas Transportation Association, Uzbekistan's and Tashkent city passenger transportation Organizations, who are the major employers of TARI graduates and main customers for research works performed by TARI.

In addition, TARI is a base university for nine polytechnic universities in Uzbekistan in preparation of curricula in Mechanical Engineering in ground vehicle designing specialty.

Currently, at TARI, there are four divisions, which are involved in teaching CAE/CAD/CAM and Engineering Graphics on Computer classes for undergraduate and graduate students in total of 580



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students. They are Automotive Manufacturing Technologies, Engineering Graphics, Automotive Maintenance, Road and Tunnel/Bridge Construction Engineering¹⁷.

- „Transport Planning“, „Investment Appraisal“, „Multimodal Transport“ modules

Based on the information available the modules are not covered in the lecture materials.

- *Erasmus Activities*

University participates in TACIS programme.

3.12.2 Bologna process

- *Participation of the Institute in the Bologna Process*

Information is not available.

- *Structure of the curricula*

The study structure is clear and transparent, modular structured, comprises compulsory and optional components, training and internship.

- *Implementation of a credit point system*

Information is not available.

3.12.3 Didactics

- *Workload*

The academic year is divided into two semesters. The University offers a variety of teaching, working methods and evaluation. The theory/practise ratio is different but well-balanced, according to the subject and requirements.¹⁸

- *Presence of theoretical and practical elements*

Theoretical elements: Classes, lectures, self-study

Practical elements: Workshops, case studies, practical trainings, lab-work.

¹⁷ <http://www.tavi.uz>

¹⁸ „Strengthening of Transport Training Capacities for NIS Countries“



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4 Conclusions

1. Almost all the above mentioned beneficiary universities are participants of the Bologna Process or, at least, deal with the Bologna Process problems during the higher education reform process. The Bologna Declaration requires the countries (universities) to adapt national curriculums to the structure of the European System of Higher Education by 2010. During the current transition period High School Curriculum represents a combination of old and new systems.

2. In the majority of the beneficiary universities the reform process relates primarily to "Gosstandard" (the State Standard of Higher Education) which allows introduction of Bachelor's and Master's Study Courses. "Gosstandard" determines the number of specialties as well as the course duration and currently allows free choice higher education subjects (approx. 30% of total course hours). It also applies the credit system which corresponds to the international standards. Therefore, despite the fact that curriculum accreditation is regulated solely by state authority the possibility to implement the new subjects within the optional part of specialization exists.

3. In addition, in some beneficiary universities essential changes and reforms regarding the subjects took place; those comply with the international standards.

Reforms regarding the subjects resulted in the following:

- new curriculums, for example, in the field of transport economy and multimodal transportations are introduced in Ukraine, at the National Aviation University;
- the modules "Transport Planning", "Investment Appraisal", "Organization of Multimodal Transport" are partly covered in the lecturing material for some specializations;
- in order to ensure a greater flexibility and participation of the interested parties some universities reconsider the new curriculum planning system;
- at Kazakh Academy of Transport and Communication the teaching department "Transport Logistics" plans to implement the material on intermodal and multimodal transport.

Based on the information available the modules "Transport Planning" (TP), "Investment Appraisal" (IA) and "Multi Modal Transport" (MMT) are not covered in the lecture materials at the other beneficiary universities. There is a great interest among almost all universities to implement "Logistics" into the study programmes but only few have started this process (e.g. Azerbaijan Aviation Academy). Main reason is lack of practical experiences in these countries, lack of qualified lectures and adequate learning materials.

And what about logistics and combined transport? Combined transport is the same as Multimodal transport.

4. The further development of transport sector in the beneficiary countries demands complete continuous training and professional growth as recommended within the framework of the EU project (EUROPEAID/126298/C/SER/MULTI) for the CIS countries (TRACECA), to be realized from 2008 to 2010. can we have it as a conclusions in the interim report as well? Rene please consider.



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5. Basic attention has to be given to the following aspects in respect to the improvement of professional skills:

- Multimodal transport networks, transport policy, logistical framework, basically, by way of organizational interaction, physical/technical interaction within the limits of one type of transport, between different types of transport and at multimodal transshipment point.
- Development of faculties on multimodal transport.
- Modern methods of planning, modeling and forecasting of transportation demand.
- Acquaintance of teaching staff and students with the newest methods and tools of transport planning.
- Investment appraisal techniques, including the analysis of financial and economic profitability, an estimation of ecological influence, estimation of risks and of social and economic influence which is also not less important, for example, influence of policy of the government on an overall performance of the given sector of economy.
- Introduce teaching staff and students to the newest methods and tools of investment appraisal.
- Pedagogical professionalism and a modern technique of teaching, since modern teaching uses various means of training (case studies, project work, interactive didactics).
- Perfection of pedagogical skills, methods of training, including remote training, and methods of development of corresponding curriculums.
- Exchange within universities (e.g. between economic and technical faculties).

May be exchanges within universities – can you think it over it as well?

6. Following the discussion with the recipient universities it may be advisable to include the subject "Multimodal Transport" into the technically focused Bachelor study, preferably into the specialization part, because it integrates the different transport modes and complements the prevailing transport mode related education, also in legal and economic aspects.

"Investment Appraisal" and "Transport Planning" would probably fit better into the Master study in most cases, since the Master Study specializes further and focuses more on economics and business administration. Concerning "Investment Appraisal" it was recommend in national seminars to split this module in case into "financial Appraisal" for Bachelor study and "Economic Appraisal" into Master Study. The reason is that "Financial Appraisal" is applicable for all entrepreneurial decisions on investments (e.g. warehouses etc.) while "Economic Appraisal" is used by transport planners and civil engineers for investments into public infrastructure only. Both parts are complementary.

(can you spell it pout? Logistiscs? Mos? Combined?.. Please specify the question.



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Annex 1: Higher Education in Ukraine

Academic and Professional Qualifications

The Ukrainian higher education system offers a combination of academic and professional qualifications acquired by mastery of the corresponding levels of educational and professional training. The Diploma, the State-recognized document issued to higher education graduates of all levels, usually serves as both an educational certificate and a professional licence, confirming the joint acquisition of educational and professional training.

Ukrainian higher education consists of a multi-layered system of studies, based on several teaching cycles. The *Law on Education* (VRU, 1996b) mentions higher education degrees of Minor Specialist, Bachelor; Specialist; and Master. A Bachelor's degree programme usually assigns about 30-35 percent of academic time given to professional training, with the rest devoted to theoretical studies. A four-year cycle of the Bachelor's degree programme entitles successful graduates to a corresponding educational and professional qualification (Bachelor of...): This qualification also enables Bachelor's degree holders to continue their education at the second-cycle programme for the degrees of Specialist or Master, again with further professional training. The programmes of postgraduate training for Specialist's or Master's degrees usually take one to two years of study. The place of higher education in the system of continuous education in Ukraine is shown in Figure 1.

Professional Higher Education Qualifications

Diplomas of higher education of all levels confirm both the educational level and professional qualification, adjusted according to national and international labour markets, where professional qualifications are defined as competence to fulfil specific professional tasks and duties.

The *List of Directions and Specialists* (CMU, 1997a) specifies the professional qualifications in the Ukrainian higher education system, according to the requirements of national and international labour markets. The levels of professional activity in Ukraine are defined as follows:

- User-level - skills for using an adjusted system;
- Operator-level - skills for preparing, adjusting and operating a system;
- Operation-level - skills for testing and analyzing system operation;
- Technological-level - skills for developing systems;
- Research-level - skills for conducting system research.

In this system, 'User-level' corresponds to the skills of a qualified worker and to the level of general secondary education. 'Operator-level' corresponds to the skills of a Junior Specialist's degree with incomplete education. 'Operation-level' corresponds to the Bachelor's degree with basic higher education. 'Technological level' is interpreted as corresponding to the Specialist's degree, and 'Research level' as corresponding to the Master's degree, although both Specialist's and Master's degrees are associated with the same educational level of complete higher education.

These levels of professional activity also require professional qualifications, related to certain groupings in the Ukrainian State Classifier of Professions (1996), as presented in Table 1.



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Qualification levels in Higher Education

Ukrainian legislation establishes a system of qualification levels in higher education, defined as follows:

- Junior Specialist - incomplete higher education, skills and knowledge sufficient for entry-level tasks; professional activity at operator's level;
- Bachelor - basic higher education, skills and knowledge adequate for general professional tasks and duties; the holder may perform professional activities at operation and operator's level;
- Specialist - completed higher education, adequate skills and knowledge sufficient for advanced professional tasks and duties; the holder may perform professional activities at a technological level;
- Master - complete higher education, skills and knowledge sufficient for advanced professional tasks and duties; professional activities performed at a research level.

Thus, in Ukraine a three-level structure of higher education (incomplete, basic, and complete levels) combines with a three-level structure of educational degrees (Junior Specialist's, Bachelor's and Specialist's/master's) and corresponding professional qualifications. However, 'incomplete higher education', resulting in the degree of 'Minor Specialist', usually represents a separate branch training. Ukrainian legislation establishes a system of qualification levels in higher education, defined as follows:

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Thus, in Ukraine a three-level structure of higher education (incomplete, basic, and complete levels) combines with a three-level structure of educational degrees (Junior Specialist's, Bachelor's and Specialist's/master's) and corresponding professional qualifications. However, 'incomplete higher education', resulting in the degree of 'Minor Specialist', usually represents a separate branch training (offered by separate vocational institutions), while Bachelor's and Specialist's/Master's degree programmes aim at developing a European-style, two-level higher education system.

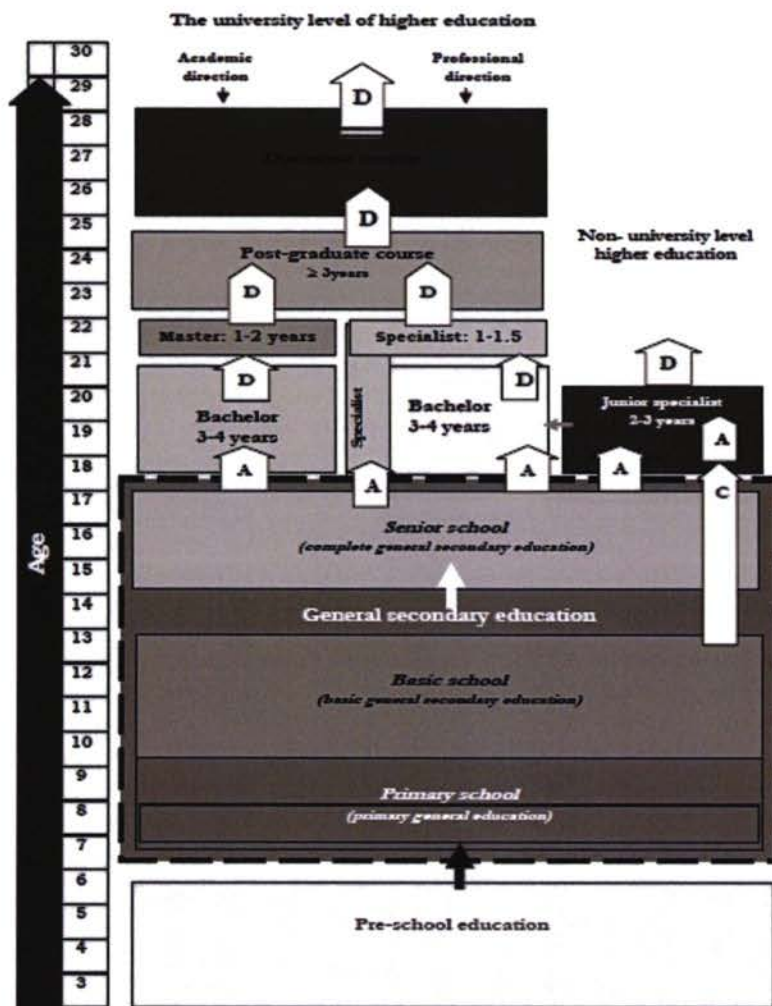


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In addition, in some special cases (such as Medicine and Veterinary studies), the Specialist's degree¹⁹ programme is available directly on the basis of secondary education, incorporating a basic higher education, yet without offering an intermediate Bachelor's degree.

Figure 1: The structure of the education systems in Ukraine²⁰



Note: C – Certificate A – Attestation D – Diploma

Source: Ministry of Education and Science of Ukraine.

¹⁹ A traditional degree inherited from the Soviet higher education system

²⁰ Source: Peter J. Wells, UNESCO-CERES Monographs on Higher Education



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Table 4: Qualification groups and the level of education in Ukraine and ISCED²¹

Levels of professional activity	Qualification groups (levels) in accordance with DKP 003-95	Education / qualification	Education	ISCED 1997 educational levels
		Levels as per <i>Law on Education</i> and <i>Law on Higher Education</i>		
Research	2. Professionals	8. Master's degree	Complete higher education	6. Higher education - second cycle (Master's degree) conferring research qualification
Technological		7. Specialist's degree		5. Higher education - first cycle (Bachelor's degree) does not confer direct research qualification
Operation	3. Experts	6. Bachelor's degree	Basic higher education	
Operator		5. Junior Specialist		
User	5. Workers in commerce and services	4. Qualified Worker	Vocational education	4. Post-secondary, non-higher education training
	7. Qualified workers with machinery			3. Second stage of secondary education
	4. Technical employees			2. First stage of secondary education or second stage of basic education
	6. Qualified workers in agriculture, forestry, fish-farming and fishery			1. Primary education, or first stage of basic education
8. Operators and assemblers of equipment and machines	0. Pre-school education			
9. Manual labour		Primary general education		

Source: The State Classifier of Ukraine (1995) and UNESCO (1998).

²¹ Source: Peter J. Wells, UNESCO-CERES Monographs on Higher Education



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System of Standards for Higher Education

The design of professional higher education in Ukraine aims for the acquisition of professional duties and tasks, as well as at the attainment of a specific professional position. Since most positions require practical experience, Ukrainian professional training is oriented towards so-called 'initial positions'. The qualifications for such positions are usually defined by legislative documents, such as the *Directory of Qualification Characteristics* (Productivity centre). The *Directory* specifies tasks and duties, required professional knowledge and necessary qualification levels. Every qualification characteristic defines certain place(s) of graduates in the national economy; it indicates relevant competence requirements and higher education standards in the form of the skills necessary to fulfil certain professional tasks. In the system of standards of higher education the above requirements are presented in a generalized form in Figure 2.

Characteristics provide a model of professional competence and serve as a guideline for education - the professional programme presented in the system of content modules (Figure 3).

Based upon education professional programmes - curricula, educational programmes, and other documents are developed as higher education standards of a higher education institution (Figure 4). The objectives of any academic discipline should conform to the requirements of the education qualification characteristics. The procedures for the accreditation of higher education institutions and those for the attestation and professional certification of graduates, determine the correspondence of educational services to the relevant higher education standards. The higher education standards also include diagnostic tools for quality assurance (Figure 5).

Quality assessment includes such procedures as attestation of graduates, development of monitoring and rating systems, monitoring the achievements of graduates, etc. From an international perspective, it seems that the most efficient form of monitoring is standardized testing, linked to unified system of graduate attestation and professional certification. This standardized approach should address a number of problems in the current Ukrainian higher education system.

The development of standards should rely on the following four main principles:

- Goal setting;
- Predictability;
- Technological effectiveness;
- Diagnostic ability.

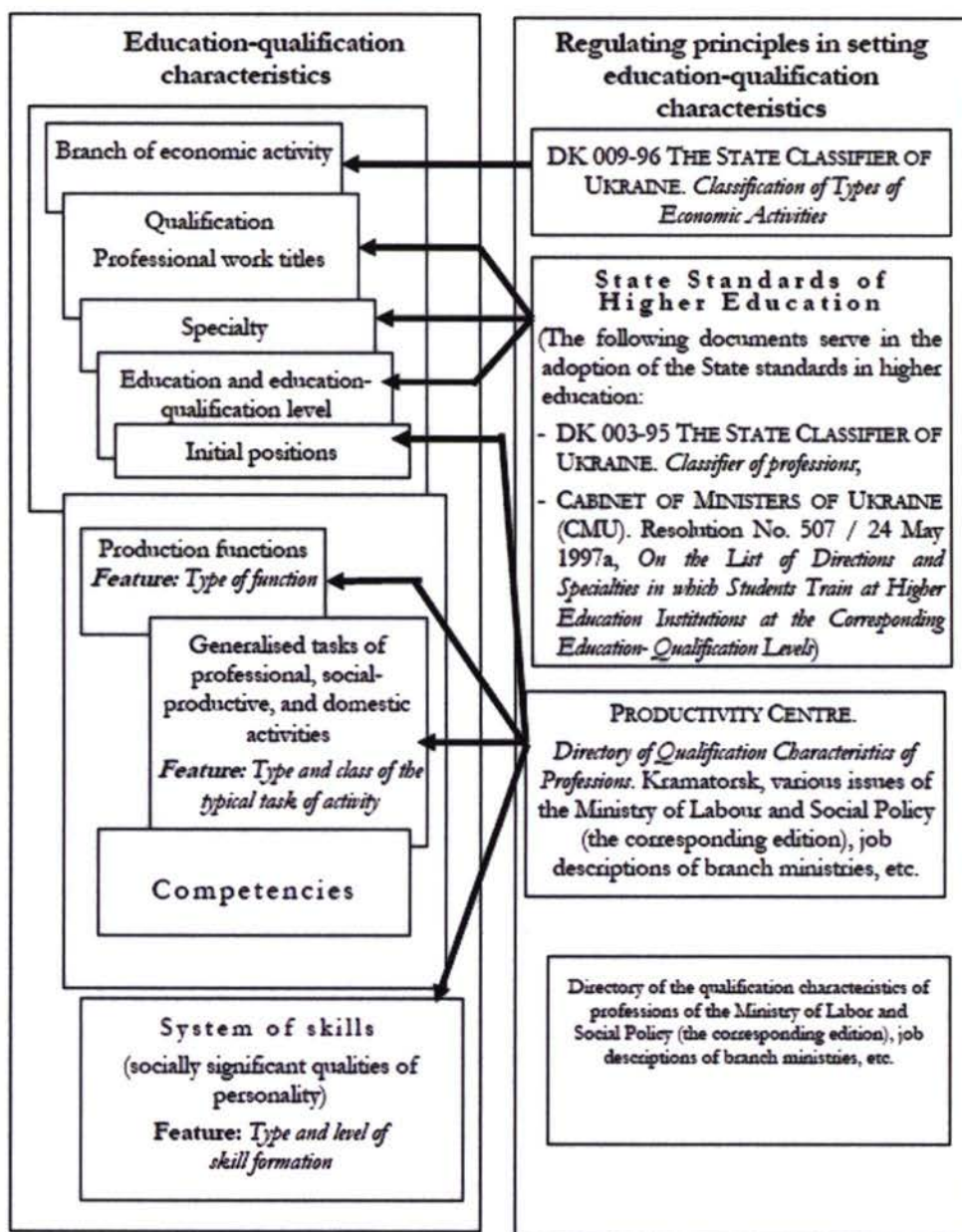
The main goal-setting priorities of the higher education system are labour and social relations. Professional training takes into account requirements of initial positions, defined in accordance with the *Directory of Qualification Characteristics* (Productivity Centre), and training principles for the given position listed in the *Classifier of Professions* (State Classifier, 1995)



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Figure 2: Characteristics of education-qualifications²²



Source: Ministry of Education and Science of Ukraine.

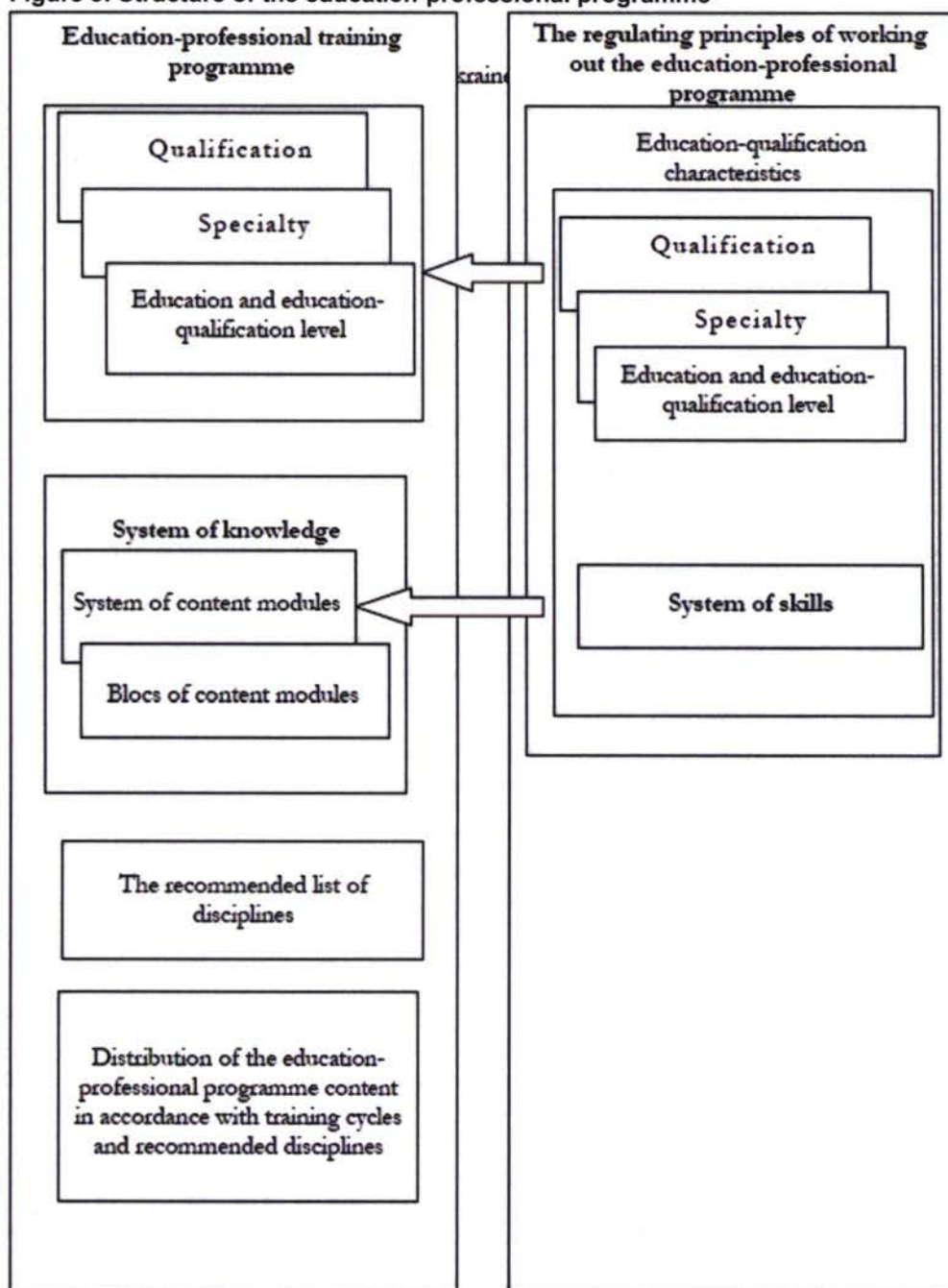
²² Source: Peter J. Wells, UNESCO-CERES Monographs on Higher Education



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Figure 3: Structure of the education-professional programme²³



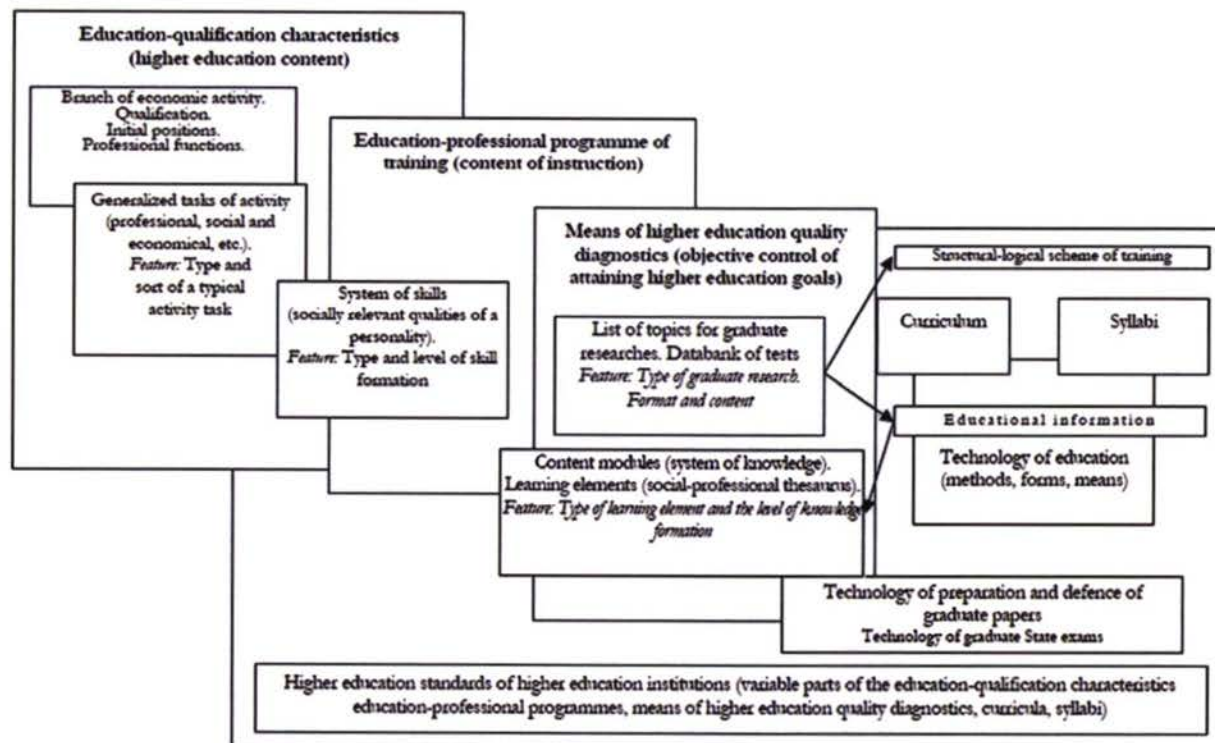
²³ Source: Peter J. Wells, UNESCO-CERES Monographs on Higher Education



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Figure 4: Interaction of separate components in the Ukrainian system of higher education standards²⁴



Source: Ministry of Education and Science of Ukraine.

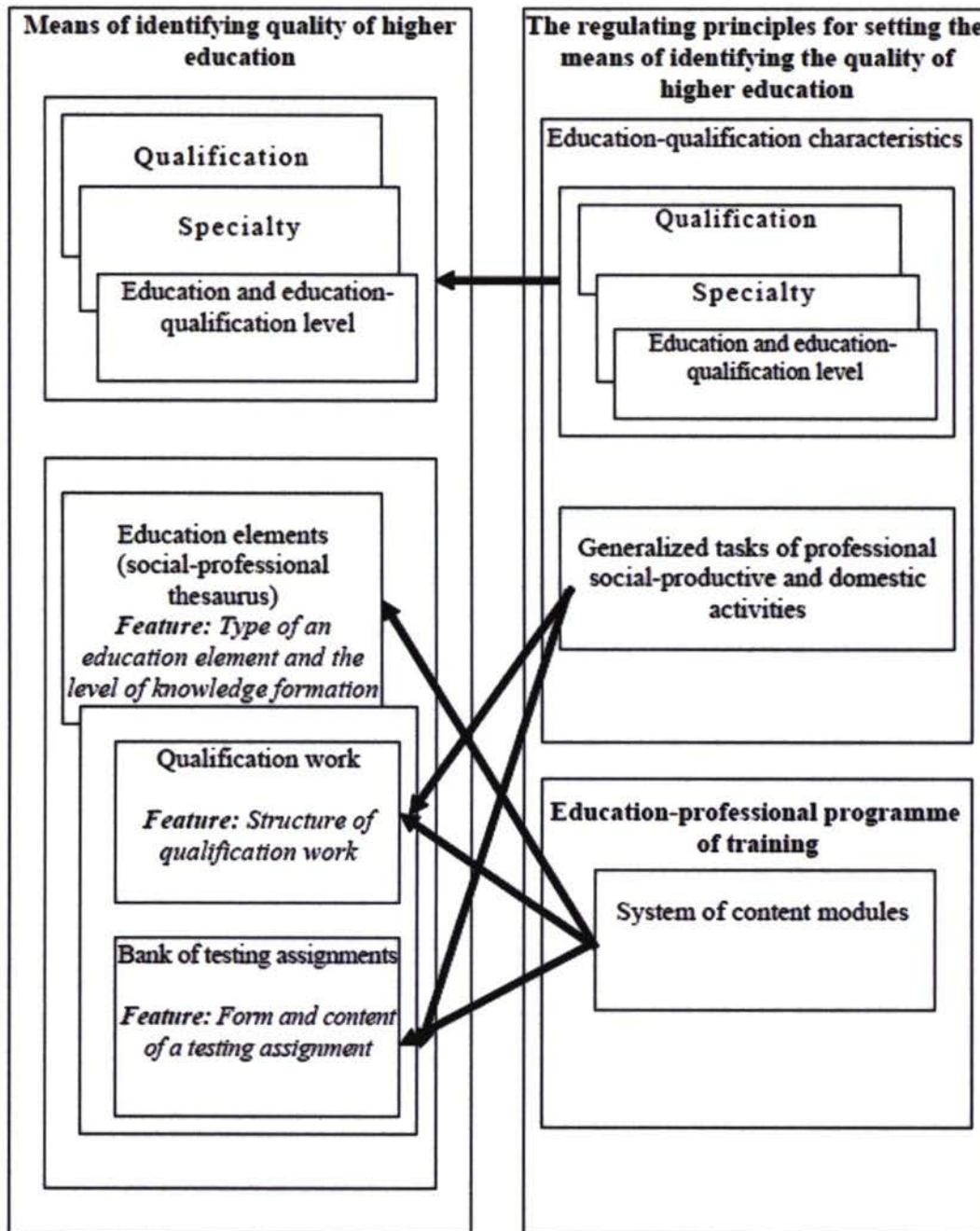
²⁴ Source: Peter J. Wells, UNESCO-CERES Monographs on Higher Education



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Figure 5: Identifying quality in higher education²⁵



Source: Ministry of Education and Science of Ukraine.

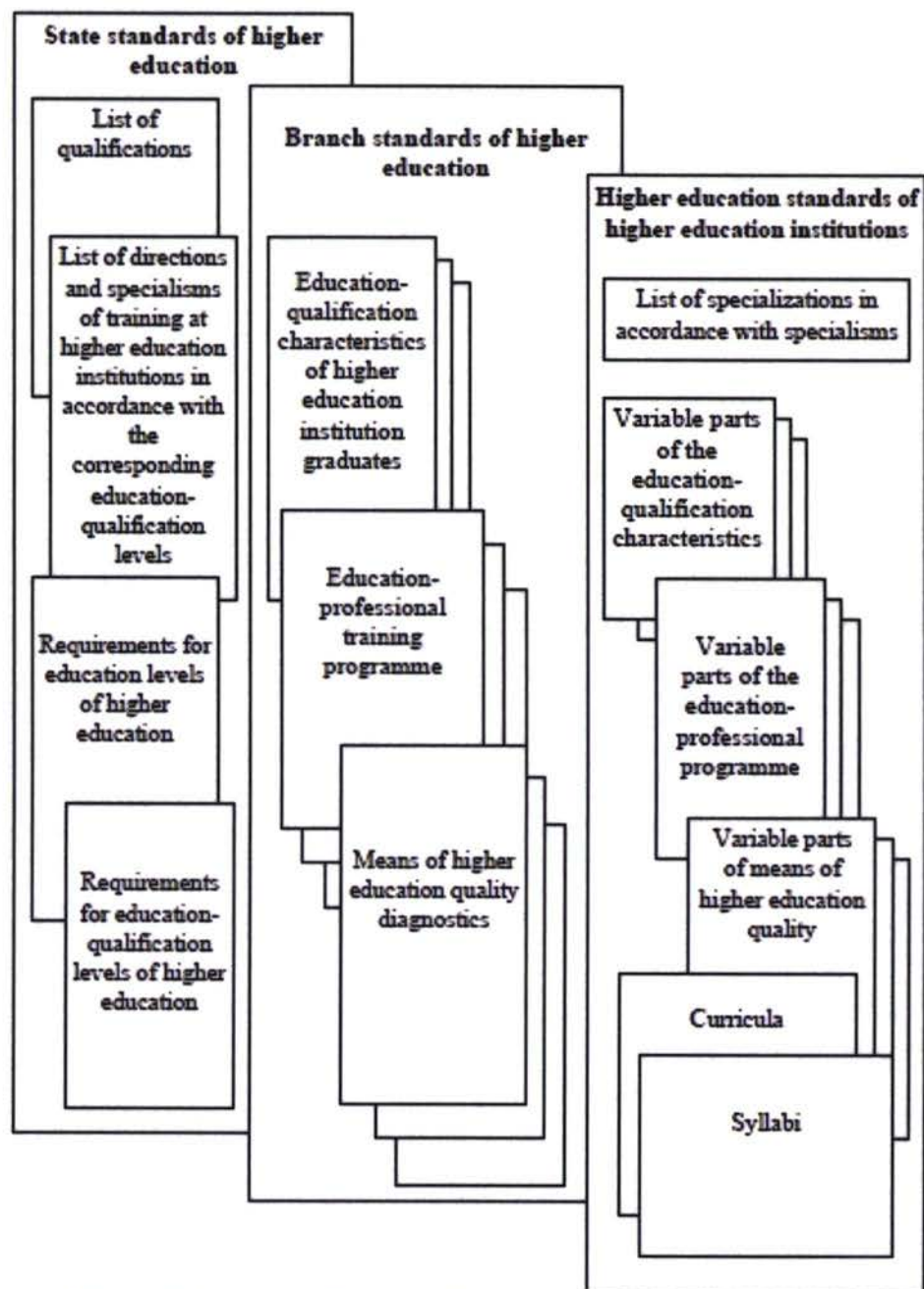
²⁵ Source: Peter J. Wells, UNESCO-CERES Monographs on Higher Education



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Figure 6: Structure of higher education standards²⁶



Source: Ministry of Education and Science of Ukraine.

²⁶ Source: Peter J. Wells, UNESCO-CERES Monographs on Higher Education



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The development of standards for higher education also considers European experiences and the promotion of Ukraine's integration into regional educational networks. The structure of Ukrainian standards follows subject areas, such as Law, Ecology, Ethics, Philosophy, etc.

Currently, the development of standards is a challenge faced by many European countries. According to Article 11 of the Law of Ukraine *On Higher Education* (VRU, 2002a) higher education standards result from interconnected components regulating the type and content of higher education at national, local and institutional levels.

The *State Standard of Higher Education* (MESU, 2003) defined the lists of qualifications, directions of training, and specialisms, as well as general requirements for each qualification level. The List of Directions and Specialisms, approved by the Cabinet of Ministers of Ukraine in 1997, provides guidelines for higher education institutions training student sat the corresponding qualification levels. According to the qualification requirements of the labour system, the initial positions of Bachelor's, Specialist's, and Master's degree holders involve certain predefined professional activities. In addition, he Ukrainian structure of knowledge areas and training directions should correspond to those listed in the International Standard Classification of Education (UNESCO, 1998).

Following its amendment between 1998 and 2003, the current list of Directions and Specialisms contains 76 directions and 580 specialisms of educational and qualification levels. Figure 5 illustrates the interconnection of the separate components of the system of higher education standards.

A new feature of Ukrainian higher education is providing students with the option to choose a particular specialism upon completion of the baccalaureate (within the limits of the given baccalaureate, interpreted in Ukraine as a general direction of professional training - e.g., Bachelor of Physics. This option is only available in the new two-level system (bachelor's degree plus Master's degree. In the past, almost every student had to choose his/her future specialism before entering the university, unaware of labour market trends. The introduction of a national credit transfer system, similar to the European Credit Transfer System (ECTS), will further expand student mobility.

Prospects for Ukrainian Higher Education

Amendments to the Law of Ukraine On Higher Education (VRU, 2002a) adopted in 2004 have further stimulated a shift towards the three-cycle system of higher education (Junior Specialist's, Bachelor's, and Specialist's/Master's education-qualification levels) to replace the older two-cycle system (Junior Specialist's and Specialist's).

Another task for Ukraine is the development of standards in higher education though a modular system of credits, similar to the European Credit Transfer System (ECTS), and in accordance with the Bologna Declaration. The implementation of the E TS system or of a similar system will allow for greater student and academic staff mobility. The Ministry of Education and Science has already begun experimenting with a credit transfer system in over one hundred Ukrainian universities.



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Annex 2: Postgraduate Education: the Magistracy²⁷

State general compulsory standard of Education of Kazakhstan Republic

POSTGRADUATE EDUCATION THE MAGISTRACY

Basic regulations SCSE RK 5.04.033-2008

Official edition

The Ministry of Education and Science of Republic of Kazakhstan

Astana 2008

Foreword

1. PROCESSED AND INTRODUCED by Technical committee 47 on standardization of education system of state standards of education and testing National center.

2. APPROVED AND IMPLEMENTED by the order of The Ministry of education and Science of Republic of Kazakhstan from May "6th" 2008, № 259.3. Introduced instead of SCSE RK 5.03.002-2004 "Magistracy. Basic regulations", approved by the order of The Ministry of education and Science of Republic of Kazakhstan from April "30th" 2004x, № 3804. In this standard the norms of Law of Republic of Kazakhstan "About Education" form 27.07.2007 № 319-III and Government regulations of Republic of Kazakhstan "About the order of elaboration, ratification and time constraints of functioning of state general compulsory standard of education", from 02.09.1999. № 12905. Coordinated with the Committee on technical regulation and metrology of Ministry of industry and trade of Republic of Kazakhstan from May "20th" 2008 №18-02-01/3-0104. This standard can not be fully or partly replicated and distributed without the permission of The Ministry of education and Science of Republic of Kazakhstan.

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8. The magistracy content of educational programs requirements.
9. The magistracy educational environment requirements.
10. The level of training requirements for people, who graduated the magistracy educational programs.
11. Application (inquiry part) 14

²⁷ Source: <http://enu.kz/edu/magistr/about.php>



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1. Field of application.

This standard establishes requirements for compulsory minimum of the content of educational programs of the magistracy and for the level of training its graduates.

The regulations of the standard are obligatory for applying and observing by all organizations, training Masters, irrespective of their departmental subordination and legal-organizational forms.

The standard can also be used by the organs of public administration, by accreditation organs, by commission on licensing and attestation of education and science organizations, by educational-methodical sections (boards) according to specialties, customers and employers and serves as the basis of Masters training quality examination.

The standard is used while preparation of standards of state general compulsory standard of education on magistracy specialty.

2. Normative references

The references to the following normative documents were used in this standard: Law of Republic of Kazakhstan "About Education" from July, 27 of 2007; PR RK 40.1.01-2008 "State system of standardization of Republic of Kazakhstan. General requirements to building, statement, drawing up, content and marking of state general compulsory standard of education"; SCSE RK5.04.019-2008 "Higher education Basic regulation", approved by the order of The Ministry of education and Science of Republic of Kazakhstan № 26 from January, 23, 2008. Official edition.

3 Terms and definitions

The terms on [1] are used in the present standard, and also the following terms with the correspondent definitions:

3.1 Credit: unified unit of volume measuring of the volume of academic work of an undergraduate; one credit is one academic hour of attendance work of an undergraduate per week during academic period (semester); each academic hour of attendance work is accompanied by 3 hours of undergraduate's self-instruction work in profile magistracy and 4 hours of undergraduate's self-instruction work – in scientific-pedagogical magistracy.

3.2 Credit technology of education: Education on the base of choice and independent planning of the progression of studying the disciplines by the undergraduate, using credit as a unified unit of volume measuring of the volume of academic work of an undergraduate and professor.

3.3 Master: Academic degree, graduated to people, who mastered educational programs of magistracy.

3.4 Undergraduate's dissertation: generalization of the results independent scientific and research work of the undergraduate in a specific subject-professional sphere of sciences according to established form.

3.5 Educational program of magistracy: General characteristics of masters' training content, stated through the list of disciplines, types and volume of academic, scientific-research/experimental-research work, professional practices and control forms.



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4. Abridgements.

The following abridgements are used in the present standard: PM – profile magistracy; SP – scientific-pedagogical magistracy; BD – basic disciplines; CC – compulsory components; OC – optional components; PIP – pedagogical practice; RP – research practice; PP – professional practice; SRWU – scientific-research work of undergraduate; ERWU – experimental- research work of undergraduate; FC – final control; IE – integrated examination; DUD – defense of undergraduate dissertation; MBA – Master of business administration; ML – Master of law.

5. Basic regulations.

5.1 In magistracy, students are educated in two directions: profile; scientific and pedagogical. Profile magistracy exercises postgraduates training programs for fields of economics, medicine, law, art, field of services and business, which are of advanced professional training. In profile magistracy also can be realized programs, which are directed to train top-managers for different activity spheres, including MBA (Master of business administration), ML (Master of law) and so on. Educational programs of profile magistracy are of applied character of education, directed to habituation of administrative skills and providing of professional managers training (managers of general profile on all aspects of administrative activity). Scientific and pedagogical magistracy exercises postgraduates training programs for higher, postgraduate education system and scientific-research sector, which are of advanced scientific-pedagogical training.

5.2 Educational programs of magistracy are realized by organizations of education and science (further - organizations), that have the license to conduct educational activity according to appropriate magistracy specialties, regardless of their departmental subordination and property form.

5.3 In magistracy, students are educated according to: - the present standard; - Glossary of specialties of higher and postgraduate education in Republic of Kazakhstan; - academic-program documentation; - individual plan of work of undergraduate; - by other documents, approved in the established order.

5.4 Undergraduates, who mastered educational programs of magistracy and defended undergraduate dissertation, are graduated "Master's" degree.

5.5 The regulations of the present standard have the following aims: - enhancement of effectiveness of work of higher education institutions and scientific-research organizations, which train undergraduates; - motivation of undergraduates' self-instruction academic, scientific-research and pedagogical activity; - to provide recognition of documents of Kazakhstan Republic about graduating the academic "Master" degree in the international educational world and in international labor market.

5.6 The standards of magistracy specialties must comply with the regulations of the present standard and define the set of requests to: - the content of education; - maximal volume of academic workload of undergraduates; - the level of training of the students.

6. Magistracies entering people requirements

6.1 Prior level of education of people, wishing to master the educational program of magistracy – higher or postgraduate (after university or institute) education.



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6.2 The order of accepting the citizens to magistracy is established by Model rules of reception in education organizations that realize professional academic programs of undergraduate (after university or institute) education.

7. The magistracy structure of educational program requirements.

7.1 The structure of educational program of magistracy is formed of different types of academic and scientific work, practice, that define the content of education, reflects their correlation, measurement and accountability. Accountability of labor-output ratio of all kinds of work is calculated from the volume of mastered material and is measured in credits. In this case, accumulating credit system works which takes into consideration the credits, mastered during the previous levels of education.

7.2 The volume of academic work is defined by the list of the disciplines to study. In this connection, discipline is valued in volume that equals a integral number of credits.

7.3 Normative duration of mastering the educational program of scientific and pedagogical magistracy is 2 years. Normative duration of mastering the educational program of profile magistracy is 1 – 1,5 year, depending on the specialty and previous training.

7.4 Education in magistracy can only be of day-time form.

7.5 Academic year consists of academic periods, period of intermediate control/ final control, practice, vacations and final exams.

7.6 Academic period is the period of theoretical training, which is established by higher educational institution independently in one of the three forms: semester that runs 15 weeks, trimester that runs 10 weeks, quarter that runs 8 weeks.

7.7 Duration of intermediate control / final control is 2 weeks (at semester form of academic process).

7.8 Undergraduates' practice is conducted in accordance with the established academic calendar in the volume, established by the correspondent state general compulsory standard of education on the specialty.

7.9 Duration of vacations in the academic year should not be less than 5 weeks.

7.10 The basic criterion of completeness of educational process in magistracy is when undergraduate masters: at profile training – not less than 24 credits (at 1 year education term) and not less than 36 credits (at 1,5 year education term); at scientific and pedagogical training – not less than 46 credits. If the undergraduate masters the educational program of magistracy he (she) can be graduated the academic "Master" degree regardless of time of education.

7.11 Undergraduate, who graduated profile magistracy, can take up scientific and pedagogical activity only in case if he (she) mastered cycle of disciplines from pedagogical profile and had pedagogical practice. The cycle is mastered during the additional academic period, when completed; undergraduate is given the appropriate certificate to the main diploma.

7.12 If undergraduate mastered the complete course of training according to educational program of magistracy, but did not defend dissertational work in the established time, in this case the undergraduate's training term in magistracy can be extended on paid bases.



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8. The magistracy content of educational programs requirements.

8.1 Level of undergraduates training requirements are defined by the content of educational programs of magistracy.

8.2 The theoretical education consists of compulsory component and optional components. The list of disciplines of compulsory component and the correspondent minimal volume of credits is defined by the present and correspondent state general compulsory standards of magistracy specialities. The list of disciplines of optional components and the correspondent minimal volume of credits is defined by the higher institution independently. In this case, employers' expectations and labor-market needs are taken into consideration.

8.3 The content of educational programs of magistracy on scientific and pedagogical direction is established in accordance with table 5.

Table 5: The content of educational programs of magistracy on scientific and pedagogical direction

	Name of discipline	Volume in credits
1.	Basic disciplines (BD)	16
1.1	Compulsory component: (CC)	9
	History and Philosophy of science	2
	Foreign language (professional)	2
	Pedagogic	3
	Psychology	2
1.2	Optional component (OC)	7
2	Profile disciplines (PD)	18
2.1	Compulsory component: (CC)	6
2.2	Optional component (OC)	12
3	Practice (pedagogical, research)*	Not less than 6
4	Scientific-research work of undergraduate, including the work upon undergraduate's dissertation (SRWU)	11
5	Final control (FC)	2
5.1	Integrated examination (IE)	1
5.2	Defense of undergraduate dissertation (DUD)	1
	Total	Not less than 46
* The number of credits, given to practice, is not included into general labor-output ratio. In case of necessity, the higher education institution can raise the number of credits, given to practice.		

8.4. The content of educational programs of magistracy on profile direction is established in accordance with table 6.



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Table 6: The content of educational programs of magistracy on profile direction

№ p/p	Name of discipline	Volume in credits	
		Education term (period)**	
		1 year	1,5 year
1.	Basic disciplines (BD)	9	10
1.1	Compulsory component: (CC)	5	5
	History and Philosophy of science	1	1
	Foreign language (professional)	2	2
	Management	1	1
	Psychology	1	1
1.2	Optional component (OC)	4	5
2	Profile disciplines (PD)	9	18
2.1	Compulsory component: (CC)	2	6
2.2	Optional component (OC)	7	12
3	Practice (industrial)*	Not less than 3	Not less than 5
4	Experimental-research work of undergraduate, including the work upon undergraduate's dissertation (ERWU)	4	6
	Final control (FC)	2	2
	Integrated examination (IE)	1	1
	Defense of undergraduate dissertation (DUD)	1	1
	Total	Not less than 24	Not less than 36

* The number of credits, given to practice, is not included into general labor-output ratio. In case of necessity, the higher education institution can raise the number of credits, given to practice.
 ** Duration of education is defined by state general compulsory standard of undergraduate education, depending on previous level of training of undergraduates and specialty.

Table 7: The content of educational program of cycle of pedagogical profile for people, who graduated profile magistracy

	Name of discipline	Volume in credits
1.	Compulsory component	5
	History and Philosophy of science	1
	Pedagogic	3
	Psychology	1
	Optional component	2
2	Practice (pedagogical)*	Not less than 6
	Total	Not less than 7

* The number of credits, given to practice, is not included into general labor-output ratio. In case of necessity, the higher education institution can raise the number of credits, given to practice.

8.5 Magistracy programs on specialties in the sphere of informational technologies mean education also in English. In this case, the number of credits, given to study of English (professional), is increased.

9. The magistracy educational environment requirements.

9.1 Educational programs of magistracy are processed and approved by organizations of education and science independently, in accordance with the specialties of magistracy, according to Glossary of specialties of higher and undergraduate education.



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9.2 Educational program of magistracy consists of:

- theoretical education, including basic and profile disciplines;
- professional practice;
- scientific-research work, including the work upon undergraduate's dissertation, - for scientific and pedagogical magistracy;
- experimental-research work, including the work upon undergraduate's dissertation, - for profile magistracy;
- intermediate and final controls.

9.3 The content of educational program of magistracy is defined by work academic plan, programs, processed on the basis state general compulsory standards of undergraduate education and model academic plans and programs.

9.4 Undergraduate is educated on the basis of individual plan of work, which is scheduled under supervision of scientific supervisor.

9.5 Individual plan of work of undergraduate is scheduled for the whole period of education, which includes the next partitions:

- individual academic plan (in case of necessity can be clarified each year);
- scientific-research/experimental-research work (theme, direction of research, terms and forms of accountancy);
- practice (program, base, terms and form of accountancy);
- theme of undergraduate dissertation with foundation of choice and structure;
- plan of writing the undergraduate dissertation;
- plan of scientific publications, period of probationer (if necessary).

9.6 Undergraduate builds his individual academic plan with the help of advisor on the basis of model academic plan and catalogue of elective disciplines. It should comprise all the disciplines of compulsory component, volume of which should not be less than defined in SCSE.

Disciplines of optional component are defined by undergraduate independently. The general number of optional components, mastered by undergraduate, should not be less than established in SCSE.

9.7 Scientific supervisor of undergraduate should have scientific degree (Doctor or Candidate of science) or academic degree of Doctor PhD/ on profile and actively take up scientific researches in the given field of science.

9.8 Academic progresses of undergraduates in magistracy are appraised using different forms of control and examination, defined by Model of conducting monitoring of study progress, intermediate and final examination of students in higher educational institutions.

To provide recognition of results of control of academic progresses of undergraduate in the international educational world, the appraisal of knowledge is done according to points-rating literal system.

9.9 Requests to practice organizing:

Educational program of scientific and pedagogical magistracy includes to types of practice:

- pedagogical – in the organization of education;
- research – at place of writing dissertation.



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Pedagogical practice is conducted to form practical skills and methods of teaching.

Pedagogical practice can be conducted during the period of theoretical education not breaking the academic process.

Research practice of undergraduate is conducted to learn the newest theoretical, methodical and technological achievements of domestic and foreign science, get familiar with modern methods of scientific researches, processing and interpretation of experimental data.

Educational program of profile magistracy should include industrial practice. Industrial practice of undergraduate is directed to grip theoretical knowledge, mastered in the process of education, acquiring practical skills and competence, and also mastering advanced experiment.

All types of practice are realized in accordance with individual plan in terms, established by academic plan.

9.10 Requirements to undergraduate's scientific-research work

Scientific-research work in scientific and pedagogical magistracy should:

- correspond to the basic problems of speciality, according to which undergraduate's dissertation is defended;
- be actual, contain scientific novelty and practical value;
- be based on modern theoretical, methodical and technological achievements of science and practice;
- be written using modern methods of scientific research;
- contain scientific-research (methodical, practical) partitions on basic defending thesis;
- be based on the advanced international experiment in correspondent area of knowledge.

9.11 Requirements to undergraduate experimental-research work

Experimental-research work in scientific and pedagogical magistracy should:

- correspond to the basic problems of speciality, according to which undergraduate's dissertation is defended;
- be based on modern achievements of science, techniques and industry and contain specific practical recommendations, independent solutions of administrative problems;
- be written using advanced information technologies;
- contain experimental-research (methodical, practical) partitions on basic defending thesis.

9.12 Scientific-research work of undergraduate, including the work upon undergraduate's dissertation (SRWU) is 11 credits.

Experimental-research work, including the work upon undergraduate's dissertation (ERWU) is 4-6 credits, depending on term of education.

Results of scientific-research and (or) experimental-research work are formed by undergraduate in the form of an account.

9.13 The conclusive result of scientific-research or experimental-research work of undergraduate is undergraduate's dissertation.

9.14 Main results of undergraduate's dissertation must be introduced in not less than one publication and/or one speech in scientific-practical conference.



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9.15 Requirements to drawing of undergraduate's dissertation, to preparing and defense are defined by normative legal acts of attorney organ in education sphere.

9.16 People ware requirements: Educational programs of magistracy are realized in organizations, that have the license for educational activity if they have not less than 45% staff teachers with scientific degrees of doctors of sciences, candidates of sciences, doctors of Philosophy (PhD), doctors on profile, teachers with scientific titles on the cycles of basic and profile disciplines of state general compulsory standards of education on specialties. In magistracy academic lessons are given by instructors, who have scientific degree of doctors or candidates of sciences, academic degree of doctor PhD or Master of scientific-pedagogical direction. For giving lessons in profile magistracy specialists-practitioners of the highest structural unit of management of the appropriate profile can be invited. When teaching in English, teachers of profile disciplines of undergraduate programs in the sphere of informational technologies must be able to teach the data domain in English.

9.17 In magistracy, the academic lessons should be given using innovational technologies and interactive methods of education. When teaching in English, academic lessons of basic profile disciplines of magistracy programs on specialties in the sphere of informational technologies must be taught in English.

9.18 Academic-methodical provision requirements: Academic-methodical and informational provision of the academic process must guarantee the possibility of qualified mastering of educational program of magistracy by undergraduates. Realization of educational program should be provided in free access to international informational nets, electronic data bases, to library funds, computer technologies, academic-methodical and scientific literature.

9.19 Logistical support requirements: Organizations, realizing educational programs of magistracy, must have logistical base (classes bank, computer classes, fund materials), that correspond to sanitary-technical code and provide conducting of all types of theoretical and practical training, mentioned by academic plan, and also efficient fulfillment of scientific-research/experimental-research work of undergraduate. Higher education institutions and scientific organizations must promote the publications of research results.

10. The level of training requirements for people, who graduated the magistracy educational programs.

10.1 General requirements

Magistracy leaver must possess fundamental scientific and professional training, manipulate with modern informational technologies, including methods of receiving, processing and storing the scientific information, should be able to formulate and solve scientific and practical problems, to plan and conduct scientific-research/experimental-research activity on the chosen specialty, to teach in higher education institutions, effectively realize research and administrative activity.

- 10.2 In the state general compulsory standards of specialties the level of scholarship of graduates must reflect requirements to general scholarship;
- social-personal competence;
- economic and organizational-administrative competence;
- professional competence;
- special competence;
- trim to the change of social, economic, professional roles, geographical and social mobility in conditions of changes dynamics.



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10.3 Final examination of students is the form of the state control of academic achievements of the undergraduate, directed to define the correspondence of acquired knowledge, techniques, skills and competence to the requirements of state general compulsory standards of education on magistracy specialties.

Final examination of students in higher education institutions or scientific organizations, are conducted in terms, written in academic calendar and work academic plan of specialties in the form of complex examination and defense of undergraduate dissertation.

Complex examination and defense of undergraduate dissertation are held by State certification commission (SCC).

The chairman of SCC is appointed by attorney organs in the sphere of education in the established order.

Complex examination is held not less than 1 month until defense of dissertation. According to the specialty, disciplines of the cycle of educational programs and profile disciplines of magistracy programs are included in complex examination.

The procedure of defense of undergraduate dissertation is define by higher education institutions independently in accordance with Model rules of control of progress, intermediate and final certification of students in education organizations, realizing academic professional programs of higher and postgraduate education.

10.4 people, who completed education according to educational program of magistracy, are given the diploma of state sample with graduating the academic "Master" degree and transcript to diploma.



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Annex 3: Normative periods of training for engineering education in different national education systems.

Country	Entry conditions	1 st year	2nd year	3rd year	4th year	5th year	6th year	7th year	8th year	9th year	10th year	11th year
1	2	3	4	5	6	7	8	9	10		12	13
Australia	General Cert, of Education level 2		Diploma	Diploma	Bachelor Diploma	Industrial Engineer Diploma	Master Diploma			PhD.		
Austria	Matura				Magister Diploma	Engineer Diploma		Doctorate				
Belgium	Maturity cert and entry conditions laid down by the universities		Candidate		License	Dr of Science						
Canada	General Cert, of Education level 2				Bachelor Diploma. Engineer Diploma	Engineer Diploma	Master Diploma			Ph.D.		
Denmark	Exam at the end of High School Studies: Numerous classes for certain disciplines					Candidate for exam or Magister		Licentiate - PhD				Doctorate



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Annex 4: Bologna Process in Armenia 2007-2009

1. Main developments since London 2007

In 2008 the Ministry of Education and Science (MoES) prepared "Development Strategy of Education for 2008-2015". It has been widely discussed by all stakeholders. The main objectives of the Strategy is to enhance the quality of education, to widen access to higher education, to create a task force for development of international cooperation, to increase the attractiveness of education system as well as ensure the effectiveness governance and financial management of higher education.

In 2008 the Government established a Fund acting under the auspices of the President of RA and aiming to provide financial assistance to the Armenian students (both citizens of Armenia and Diaspora Armenians) studying at best higher educational institutions (universities, colleges) worldwide.

Transfer to the two-cycle degree system has been completed. Almost 95% of total number of students (excluding doctoral level) is studying with the two cycles. Two universities started to issue Diploma Supplement both to Bachelor's and Master's degree programme students. Starting from 2008 all the educational programmes in Armenia are based on ETCS.

The MoES has developed the proposal for criteria of independent national Quality Assurance Agency and submitted to the Government for approval.

2. Partnership

Since 2006, the Bologna Committee has been appointed in the MoES composed by all stakeholders of education to coordinate and evaluate implementation of Bologna process as well as to support Higher Education Institutions (HEIs) and disseminate good practice.

National Information Centre for Academic Recognition, an official national group for Bologna follow-up and Bologna Promoters' group include representatives of Ministry, Rectors' conference, Academic staff, Students, Staff trade unions, National Quality Assurance Agency and Employers.

Bologna promoters are a group of professionals that advise and work with their colleagues on the implementation of the Bologna reforms: the three-cycle degree system, quality assurance, recognition process (ECTS, Diploma Supplement, mobility issues). They are involved in different type of activities; seminars and conferences, regular visits to HEIs and publishing of a newsletter.

DEGREE SYSTEM

3. Stage of implementation of the first and second cycle

a) The progress made towards introducing the first and second cycles.

95% of total students were enrolled in two-cycle system. All successful bachelor degree and master degree students have access to the next cycle; master and doctoral level accordingly.



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b) Total number of all²⁸ students below doctoral level enrolled in the two cycle degree system in 2008/09.

Total number of all students below doctoral level	Number enrolled in the two cycle degree system in 2008/09	% of all students enrolled in the two cycle degree system in 2008/09
Bachelor 90.000	23.000	24%
Master 18.000	8.000	

c) Current situation regarding implementation of the two cycle system.

All study programmes are designed according to the Bologna principles: qualifications descriptions; educational standards are developed for each specialisation and based on ECTS.

4. Stage of implementation of third cycle

The progress made towards implementing doctoral studies as the third Bologna cycle:

- total number of enrolled in doctoral studies/aspirantur/comprises 12.000 and almost half of them are involved in the coordinated programmes;
- duration of doctoral studies is at least 3 years: full time - 3 years (coordinated doctoral programme), distance - 4 years (coordinated doctoral study), in case of free creative programmes - up to 5 years;
- educational component of doctoral degree includes knowledge of foreign languages, research methodologies, writing, general civil development, various related classes, special classes, teaching practice modules;
- educational component of doctoral degree includes current and summary seminar attesting, as well as defence of summary research paper;
- doctoral studies comprise the 3rd cycle in higher education qualification framework;
- a sample form for calculation of credits for doctoral programmes is designed and provided to higher education institutions.

5. Relationship between higher education and research

a) The main trends in the role of higher education institutions in research.

Research laboratories have been established and refurbished in HEIs. HEIs and research organisations have concluded partnership contracts; special chairs of relevant higher educational disciplines were established at the research institutes.

b) Percentage of GDP spent on research from public and private funds

Research funding is presently 1% of GDP, another 60% is from public funding and the rest from other sources: private, international.

6. Access and admission to the next cycle

6.1 Access and admission between the first and second cycles

a) The percentage of first cycle qualifications that give access to the second cycle.

²⁸ „All“ = all students who could be involved in 2 cycle system, i.e. not those in doctoral programmes and not those in short HE programmes. Students of all study fields are taken into account.



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Individuals with Bachelor's qualifications are eligible to continue their studies in the second cycle on competitive basis. They comprise 25-30% of the total number of graduates by the disciplines, including 20% current graduates, and 5-10% previous years graduates. Transfer from the first cycle to the second is performed by procedures specified by HEIs to maintain their independence, and by taking into account special features of each HEI and peculiarities of disciplines. The Government has defined procedure stating general policies and criteria.

b) All qualification obtained during the first cycle (Bachelor, Diploma Specialist) provide access to the second level-master degree in relevant or related fields.

c) Special requirement for access to a second cycle programme in the same fields of studies is an entrance exam.

d) Special requirement for access to a second cycle programme for students coming from other fields of studies is an entrance exam and/or work experience.

6.2 Access and admission between the second and third cycles

a) The percentage of second cycle qualifications that give access to the third cycle.

All graduates of second cycle have access to the third cycle. The transfer between the second and the third phases is performed according to degrees obtained during previous years - master (degree equated to Diploma Specialist to qualification of Master degree by 2010). For transfer to the third cycle apart from holding a preliminary qualification degree each applicant should take exams in foreign languages, informatics (computer literacy) and courses in their own specialization. Applicants' research publications will also be taken into account.

7. Employability of graduates/cooperation with employers.

a) Measures that have been taken to enhance the employability of graduates with bachelor qualifications.

Career Centres are established at HEIs jointly with the employers to help the graduates find the job. Also, once a year job fairs are organised. Up to 40% of the first cycle graduates, up to 70% of the second cycle graduates and 80% of the third cycle graduates find jobs according to their qualifications.

b) Extent of a dialogue between HEIs and employers on:

- curriculum design, work placements and international experience - some;
- accreditation/quality assurance - some;
- university governance - significant.

8. Implementation of national qualifications framework

a) Preparation of the national qualifications framework.

The development of the NQF is in process. Council of Europe has been supporting the MoES: in June 2008 there was a consultative mission of an expert to assess the development of the NQS and to provide further recommendations. In September 2008 the MoES with the support of the Council of Europe organised a regional conference on the qualification framework. The Draft document was discussed on all educational levels, with participation of experts, academic staff, students, employers and trade unions. All



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formal arrangements decisions for implementing the framework are in place and the necessary formal decisions for establishing the framework have been taken. In 2008 there has been amendments proposed in the Law "On Higher Education and Postgraduate Professional Education" regarding qualifications, general descriptors, learning outcomes.

b) Generic descriptors for each cycle based on learning outcomes and competences in the framework or in the proposed framework.

The developed framework is compatible with the Overarching Framework of Qualifications of EHEA including learning outcomes based on descriptors. Generic descriptors for each cycle will be based on learning outcomes, including ECTS credit range for the first and second cycles.

c) ECTS credit range for the first and second cycles.

Each cycle includes credit ranges: Bachelor 240 credits, Master - 120 credits.

d) Implementation of the national qualification framework (NQF)

There is a timetable for implementation of the NQF and the work has started. According to the timetable the NQF will be adopted by 2010; there has been no formal decision taken yet.

e) Stage of progress on the self-certification of compatibility with the EHEA framework.

Self-certification of compatibility with the EHEA framework has not been started yet.

NATIONAL IMPLEMENTATION OF THE STANDARDS AND GUIDELINES FOR QUALITY ASSURANCE IN THE EHEA (ESG)

9. Reviewing the QA system against the ESG and national support for implementation

a) Review of the national QA system against the ESG.

The national QA system has been reviewed against the ESG.

b) Further details of the review process.

The draft decree on the establishment of the National Agency for Quality Assurance is submitted to the Government for approval. The Quality Assurance Agency will operate according to the ESG requirements.

c) Stakeholder consultation on changes to the national QA system is required.

As regards the introduction of specific financial or other incentives aimed at improving the internal quality assurance process in institutions units of quality assurance are created in HEIs to carry out internal quality assurance. State budget has special allocation earmarked to HEIs to improve the quality - training of staff including academic, preparation of guidelines and instructions, publication of relevant materials. Negotiations with the World Bank on a new loan project have been completed; part of the funding will be directed to support creation of quality assurance units in HEIs and implementation of activities.



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9.1 Internal quality assurance in higher education institutions

The internal QA systems in place in HEIs: according to the procedures there are internal quality assurance systems in HEIs. In 2008 TEMPUS “Internal Quality Assurance System in Armenian Institutions” Project was launched aiming to design and implement relevant internal quality assurance systems in Armenian HEIs.

- a) Most of the HEIs have published a strategy for the continuous enhancement of quality.
- b) All HEIs have arrangements in place for the internal approval, monitoring and periodic review of programmes and awards. Self-assessment of programmes implemented by units of HEIs and periodic reviews by HEI’s academic boards, students feedbacks, knowledge assessment new system based on learning outcomes, etc.
- c) Most of the HEIs have described their programmes in terms of learning outcomes.
- d) Most of the HEIs applied in a consistent way student assessments designed to measure the achievement of the intended learning outcomes (based on published criteria).
- e) Most of the HEIs publish up to date, impartial and objective information about the programmes and awards offered.

10. Stage of development of external quality assurance system

- a) The stage of implementation of external assurance system.

Starting from 2009 the agency will perform external quality assurance according to ESG.

- b) External quality assurance system operates at a national level.
- c) External quality assurance system covers all higher education.

The following elements are included in external quality assurance system:

- self-assessment;
- external review;
- publication of results;
- follow-up procedures.

- d) A peer review of the national agency according to the Standards and Guidelines for QA in the EHEa has not taken place yet.

11. Level of student participation

Aspects of quality assurance in which students are involved:

- in governance of national agencies for QA - yes;
- as full members in external review teams - no;
- as observers in external review teams - yes;
- as part of the decision making process for external reviews (e.g. arrangements for external reviewers to consult with students) - yes;
- in internal quality assurance (e.g. periodic review programmes) - yes;



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- in preparation of self-assessment reports - yes;
- in follow-up procedures - yes.

Student involvement in external quality review processes is conditioned by the establishment and operation of the National Quality Assurance Service.

12. Level of international participation

There is international participation in quality assurance in:

- the governance of national agencies for quality assurance;
- the external evaluation of national quality assurance agencies
- teams for external review of institutions or programmes, either as members or observers;
- membership of ENQA;
- membership of any other international network.

Armenia is a member of EQAR.

RECOGNITION OF DEGREES AND STUDY PERIODS

13. Stage of implementation of Diploma Supplement

In 2008 the Diploma Supplement has been issued by YEREVAN State Engineering University and State Medical University to the graduates of Bachelor and Master cycle programmes whose studies are based on the ECTS. The format and content of the DS is designed according to the guidelines developed by EU/CoE/UNESCO.

- a) The Diploma Supplement issued to students graduating from:
- 1st cycle programme;
 - 2nd cycle programme;
 - 3rd cycle programme;
- b) The Diploma Supplement issued:
- in a widely spoken European language;
 - free of charge;
 - on request;
 - corresponds to the EU/CoE/UNESCO Diploma Supplement format.

13.1 Use of Diploma Supplement for recognition of qualifications

- a) The Diploma Supplement is used as the reference document when admitting holders of foreign qualification to the second and third cycles. The DS is used to compare learning outcomes of a qualification to understand the purpose of the educational programme as well as to receive general information regarding the educational system where the qualification/degree was obtained.
- b) Specific actions have been taken at a National and Institutional level to enhance the use of Diploma Supplement as a communication tool towards the labour market.

14. National implementation of the principles of the Lisbon Recognition Convention

- a) Compliance of appropriate legislation with the Lisbon Convention



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The laws "On Education" and "On Higher and Postgraduate Professional Education" are presently in process of revision in order to fully comply with the principles of Lisbon Convention.

b) Compliance of appropriate legislation with the later Supplementary Documents:

i) Recommendation on the Criteria and Procedures for Recognition

Appropriate legislation complies with the aforementioned. The MoES has proposed some amendments in the Law "On Education" in correspondence with Lisbon Recognition Convention. The National Information Centre is responsible for assessment of foreign vocational and higher education qualifications, providing advice and information on education system. In the existing regulations there are no specific procedures for academic recognition: the universities usually are in charge of the recognition which is mainly based on the old tradition of comparing subjects that comprise the educational programme and teaching hours. The National Information Centre for Academic Recognition and Mobility (NICARM) has conducted a survey on recognition procedures of foreign qualifications, the existing problems. The results of the survey show that universities are not fully implementing recognition procedures and have problems with credit transfer and with interpreting learning outcomes. Nevertheless, there has been some progress observed in cooperation between universities and NICARM in the issues of advising on qualifications, education systems and recognition procedures. The NICARM is planning seminars on the issues of recognition for the universities.

ii) Recommendation on the Recognition of Joint Degrees

There are no specific provisions regarding recognition of Joint Degrees in the Armenian legislature. The recognition of foreign joint degree qualification is done under the condition that it is recognised by the countries where the degree was awarded.

iii) Code of Good Practice in the Provision of Transnational Education

According to the Law "On Education" a foreign HEI can establish a branch or representation in Armenia following the required procedures for licensing and accreditation of their educational programmes and institutions. The current legislation does not provide any prevention mechanisms for non-registered, not recognised transnational education. As a result the holders of qualifications that were awarded by transnational education providers face serious recognition problems.

c) Applicants have right to fair assessment.

NICARM provides all needed information to applicants concerning the assessment process, criteria, approximate time needed to process an application.

i) Recognition is granted if no substantial differences can be proven

ii) Recognition is not granted if substantial differences are demonstrated

iii) There is a fully operational ENIC. NICARM is the Armenian representative of the International Network of National Information Centres. NICARM is an authorized body to provide all kind of information regarding HE programmes and institutions of Armenia.

d) In order to implement full compliance with the Convention further amendments of legislation are needed.



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15. Stage of implementation of ETCS

a) The percentage of the total number of higher education programmes²⁹ in which all programme components are linked with ECTS credits: 50-75%. Introduction of the ESTC has started in 2006-2007 academic year which was also an opportunity to modernise curricula according to the Bologna Process. The ECTS has been introduced at the majority of the Armenian universities.

b) In all programmes ECTS credits linked with learning outcomes.

c) There have been organised seminars for the universities and MoES officials for better understanding of learning outcomes.

d) HEIs performing periodic review of student workload to improve basic components of programmes.

e) Guidelines for implementation of ECTS has been developed by Working Group of the MoSE and disseminated to the HEIs.

LIFELONG LEARNING

16. Recognition of prior learning

a) Nationally established procedures to assess (RPL) as a basis for access to HE programmes.

Study periods are recognised by HEIs themselves though there are no specific procedures for assessment, but recognition procedures are proved to be used at some of the universities or educational programmes.

b) Nationally established RPL procedures to allocate credits towards a qualification.

There are procedures for transfer to higher educational institutions from middle vocational institutions.

c) Extent to which any such procedures applied in practice.

Elements of life-long concept are defined by the Law "On Higher and Postgraduate Education in Armenia" as supplementary postgraduate programmes. The purpose of the programme is to improve qualification, bring the skills up to date. Internal corporate training is also organised. There are several non-governmental adult learning organisations. The development of distance learning, e-learning with introduction of ECTS at the universities will largely promote learning opportunities for all ages.

JOINT DEGREES

17. Establishment and recognition of joint degrees

a) Joint degrees specifically mentioned in legislation and legislation fully allows establishment of joint programmes. However, the legislation does not allow awarding of joint degrees as the process with full implementation of ECTS has just started and procedures are being developed.

²⁹ *Except doctoral studies*



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b) En estimate of the percentage of institutions which are involved in:

- joint degrees - 25-50%;
- joint programmes - 25-50%.

c) The level of joint degree/programme cooperation is little in all three cycles.

d) Joint degree/programme cooperation most widespread in pedagogy, economics, information technologies.

e) There are around 10 joint programmes.

MOBILITY

18. Removing obstacles to student and staff mobility

a) Measures that have been taken both at governmental and institutional level to enhance student and staff mobility and overcome main obstacles.

The number of mobile students from and to Armenia is increasing each year. As a result of the reforms in higher education, networking between higher education institutions was intensified and the mobility of students and teachers was increased. The mobility in Armenia is realised:

- by academic exchange within the frames of the intergovernmental or interuniversity agreements;
- grants and scholarships from the international organisations and foundations (e.g. Muskie, DAADd, British Council, Tempus);
- upon individual initiatives.

Business studies are the most popular subjects, followed by social sciences and languages.

Currently, more than 100 scholarships for undergraduate and graduate studies in Armenia are awarded each year. The total number of outgoing students is about 600. The most popular destinations are US, Russia, Germany and United Kingdom. According to the statistics only 10% of university academic staff and students are involved in various mobility programmes each year.

b) There no obstacles for foreign students entering Armenia, but Armenian students and academic staff still face problems to obtain visa and/or work permit for the EU countries.

c) RA Government has created student mobility support Fund with the aim to provide scholarship for the Armenian and Diaspora students to study abroad. Foreign students studying within the frames of the international agreements receive scholarship.

d) Recognition of study periods abroad

The majority of HEIs have common principles when assessing study periods: institutions look for full compliance with their own curricula based on credits. The credit transfer decision is based on comparison of learning outcomes.

e) Besides financial aid, Armenian authorities are also making effort in solving issues related to improvement of foreign students living conditions including assistance with their employment during the course of their studies.



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f) RA Government has established a foundation which will create an opportunity to study in institutions of various countries and get financing regardless of interstate agreements. Increased provision of information on foreign educational institutions posted on internet site of the MoES and disseminated through mass media.

THE ATTRACTIVENESS OF THE EHEA AND COOPERATION WITH OTHER PARTS OF THE WORLD

19. Implementation of strategy

a) Measures that have been taken to implement the strategy “European Higher Education in a global Setting”.

The importance of integration into the European Higher Educational area is being discussed at all levels. Integration into the EHEA is recognised as a priority, and the main goal is to enhance the quality of education and ensure competitiveness and competitiveness of EHEA. The list of countries with which Armenia is concluding inter-state student and professor exchange agreements has been expanded and the participation in joint programmes under the sponsorship of international organisations such as Tempus, Soros, Erasmus Mundus, etc. has increased. The issue of recognition of qualifications is being addressed through bilateral and international agreements.

b) The OECD/UNESCO Guidelines for Quality Provision in Cross-border Higher Education applied to incoming higher education provision.

FUTURE CHALLENGES

20. Main challenges for higher education

Armenia's Higher education sector presents significant challenges and opportunities for development. A decade-long reform process has resulted in tangible results. But despite a reformed administrative and legal framework, there are issues that continue to prevent the system from assuming its full potential in driving the country's transition to a competitive democratic society. The inadequacies between learning outcomes and the demands of the contemporary job market; improvement of teacher education and teaching materials; not fully shaped system of professional development in Higher Education Institutions are some of the challenges to be addressed and act as barriers to the quality and relevance of education and to social and economic development in general.

Short term challenges:

- Strengthen the financial portfolio management of HEI
- To improve Lifelong learning programs and structures
- Internationalization of HEIs
- Fostering joint degree awarding programmes

In the long term perspective:

- To create more competitive and higher quality education systems resulting from better coordinated and more effective reforms, coupled with increased confidence of citizens and investors in Armenia's education system.
- To improve and streamline organizational structures and systems to support strategic planning, policymaking and program implementation, monitoring, budgeting and other related functions.

Source: Bologna Process, National Reports: 2007-2009, 01 November, 2008;



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Annex 5: Bologna Process in Azerbaijan 2007-2009

1. Main developments since London 2007

- The Board of the Ministry of Education adopted a decision "On the conducted work, existing problems and the ways of their solution in higher educational institutions" and on continuing the experiments for the organisation of training with application of the credit system and the Ministry issued an order in connection with the aforesaid (Order 340, 19.04.2007).
- Respective changes were made in "The Exemplary Regulation of the Organisation of Education process in Higher Schools with Application of the Credit System", and the documents was approved by the Ministry (Order 914, 23.07.2007);
- President of the Republic of Azerbaijan issue a Decree on January 31, 2008, "On certain measures connected with integration of higher educational institutions of the Republic of Azerbaijan into the European Higher Education Area".
- The new list of qualification for the first cycle of higher education (Bachelor level) has been elaborated on the basis of the documents adopted by UNESCO and submitted to the government of the Republic of Azerbaijan for approval (Letter of the Ministry of Education 40-11-52/247, dated 05.02.2008).
- In conformity with the Instruction of the President of the Republic of Azerbaijan "On certain measures connected with integration of higher educational institutions of the Republic of Azerbaijan into the European Higher Education Area" dated January 31,2008, Draft Programme on the reforms to be concluded in higher educational system in 2009-2012", which reflects the provisions of the Bologna Declaration, has been developed and submitted to the Azerbaijan government for approval (Letter of the Ministry 40-11-151/14, 31.03.2008).
- On the basis of the model of Diploma Supplement developed by the joint working group of the Council of Europe, European Commission and UNESCO/CEPES the new format of Diploma Supplement has been developed for Bachelor and Master level of education and approved by the relevant order of the Ministry of Education (Order 990, 08.08.2008).
- In conformity with the Bologna Declaration Azerbaijan takes certain measures on recognition of education documents granted by higher educational institutions of foreign countries. Commission on Recognition of Diplomas at the Ministry of Education has recognised the foreign diplomas of some 932 students in 2007-2008.
- The Ministry of Education issued a special order for widening and continuing the experiments connected with the application of credit system in institutions of higher education (Order 1137, 10.10.2008).
- The Provision Regulations for evaluation of the knowledge of students with the credit system has been developed and approved by the Ministry of Education (Order 1060, 11.09.2008).
- After joining of Azerbaijan to the Bologna Process the content and structure of Master level of education have been renewed, the Draft on the Minimal Requirements of the State to the Level and Content of Training for Master degree has been developed and forwarded to higher educational institutions for review (No. 46-11-7587/17, 14.10.2008).
- A working group was formed to monitor the experiments connected with the application of the credit system in higher educational institutions of the Republic of Azerbaijan (Order 1146, 16.10.2008). The work is still being continued.
- A Workshop is functioning on permanent basis for studying the experience connected with application of the credit system in the Republic of Azerbaijan where local and foreign experts convey information and exchange experience.



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- Higher educational institutions organise events where the students and their parents get necessary information on the credit system; trainings are organised for teaching staff. The majority of higher educational institutions have developed relevant guidelines and instruction on the credit system.
- The national accreditation of higher educational institutions has been continued, and in 2007-2008 eleven higher educational institutions were accredited (Azerbaijan Medical University, Azerbaijan Technological University, Azerbaijan State University of Culture and Arts, Azerbaijan International University, Azerbaijan Scio-Political University, Baku Slavic University, Caucasian University, Azerbaijan Technical University, Azerbaijan University of Architecture and Civil Engineering, Azerbaijan State Pedagogical University, Baku Asian University)
- The Provisional Regulations on Examination for students studying on the credit system has been developed and approved (Order 1059, 11.09.2008).

2. Partnership

The institution which supervises implementation of provisions of the Bologna Declaration is the Ministry of Education.

A working group has been formed for implementation of provisions of the Bologna Declaration in the Republic of Azerbaijan after joining the Bologna Process. The group consists of the employees of the leading departments of the Ministry, administrators and representatives of the teaching staff of higher educational institutions. An Accreditation Commission has been set up at the Ministry for monitoring the quality of education, and the Commission is chaired by the Minister. The Commission consists of the chiefs of the leading departments of the Ministry, representatives of the Institute of Education and other ministries.

The Draft Program on Conducting Reforms in the System of Higher Education in 2009-2013 paves the way for the creation of a special body at the Ministry of Education for accreditation of higher educational institutions. There are a total of 20 public higher educational institutions under the subordinate of the Ministry of Education.

A number of higher educational institutions are still supervised by different ministries, committees, etc. At present, there are a total of 50 higher educational institutions in Azerbaijan, including 13 private higher educational institutions.

Irrespective of whether the university is public or private, the quality of education and training methodology in all the higher educational institutions of Azerbaijan are controlled by the Ministry of Education of the Republic of Azerbaijan.

National Bologna follow-up group includes representatives of Ministry, Rectors' conference, Academic staff, Students, Staff trade unions, National Quality Assurance agency, Employers.

DEGREE SYSTEM

3. Stage of implementation of the first and second cycle

a) The progress made towards introducing the first and second cycles.

In accordance with the Law "On Education" of the Republic of Azerbaijan, training of specialists within the framework of multi-tier higher education system has been established in the Republic. In accordance with this Law, the Bachelor and Master levels were set up in 1993 and 1997 respectively. Training of



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specialists within the framework of a single-level education system has also been continued for some medical specialties.

The graduates of the first cycle of the tow-tier higher education institutions receive the Bachelor degree in accordance with the appropriate state standards. The most advanced and promising part of graduates of the Bachelor level entry the MA level on the basis of competition by passing an entrance examination. The graduates of the Master level receive a qualification on Master specialization and scientific degree by the decision of the Specialized Scientific Board for the research work. In connection with the transfer to the two-tier education system serious changes have been made both in the structure and content of the higher education. The entire legal-normative bases has been re-developed and applied. Minimal state requirements for the level of Bachelor and Master education programs have been identified and the state education standards have been developed accordingly. New curricula and syllabi have been developed and applied on the basis of those standards.

b) Total number of all³⁰ students below doctoral level enrolled in the two cycle degree system in 2008/09

Total number of all students below doctoral level	Number enrolled in the two cycle degree system in 2008/09	% of all students enrolled in the two cycle degree system in 2008/09
Bachelor 120.713	27.407	97.4%
Master 7.943	3.750	78%

c) Current situation regarding implementation of the two cycle system.

Radical changes took place in the higher education system and the plan of appropriate actions has been approved in conformity with the Bologna Declaration requirements. In 2006, a new structure of the minimal state requirements for the level of Bachelor education was developed. After the approval of the structure, state education standards for all specialties for Bachelor level training in higher education institutions were developed with the participation of the experts and were approved by the Ministry of Education (Order 639, 04.08.2006). It was decided to develop syllabi meeting those standards, as well as to approve and apply them in the first years beginning from 2006/2007 academic year.

4. State of implementation of the third cycle

The progress made towards implementing doctoral studies as the third Bologna cycle:

Postgraduate study is a traditional form of training candidates of sciences in higher education and research institutions. The duration of training in postgraduate study is 3 years. This form of training has not been changed in the frames of the Bologna Process. Postgraduate study is not mentioned formally as the third level of higher education. This study includes the compulsory theoretical training program reflected in the individual plan of postgraduate students. Foreign language, Information Science and learning of special disciplines comprise the content of training post-graduates. Learning of each discipline is accomplished with passing an exam. About 20% of the time allocated for post-graduate training is aimed at increasing the theoretical knowledge, and the remaining time is allocated to conduct independent scientific researches. Individuals with MA and "specialist" diploma have an access to the programs of post-graduate training. The individuals with a Bachelor diploma are not admitted to post-graduation courses. Post-graduate study is followed by the doctorate level. The PhD program is carried out within 3 years. This form of training has not been changed in the frames of the Bologna Process. Individual with

³⁰ „All“ = all students who could be involved in 2 cycle system, i.e. not those in doctoral programmes and not those in short HE programmes. Students of all study fields are taken into account.



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scientific degrees of candidate of science and ability to conduct researches on higher level are admitted to PhD level. The PhD programs do not stipulate learning of theoretical disciplines and passing exams. The 3-year period is allocated only for conducting researches.

5. Relationship between higher education and research

a) The main trends in the role of higher education institutions in research.

The Law "On Education" of the Republic of Azerbaijan defines the higher education institutions as both the centre of education and important research centres. According to this Law, the higher education institution takes part in the accomplishment of programs and projects on the basis of state orders, agreements and contracts along with providing a constant improvement of the education process in accordance with the scientific specialization. For this purpose scientific-research institutes, laboratories, centres, etc. function in higher educational institutions along with departments.

Scientific research is conducted in 20 departments of the higher education institutions subordinate to the Ministry of Education, as well as scientific research institutes. At present, under higher educational institutions there are 3 scientific-research institutes, 4 scientific centres and 93 scientific-research laboratories which are financed through the state budget.

Important work is carried out in higher educational institutions for generalization and dissemination of scientific-technical achievements, application of scientific results, innovation, inventions and patent license activities, preparation and publication of scientific journals, dissertation, and scientific articles.

Also, education course of innovate nature are developed to improve the quality of national educational standards, programs and projects textbooks, as well as the education system.

32.2% of the higher qualified scientific and scientific-pedagogical personnel, including 50% of the PhD's and candidates of science are concentrated in the system of the Ministry of Education.

b) Percentage of GDP spent on research from public and private funds

0.2% of the GDP is allocated to science. Scientific research is mainly financed through the state budget.

In addition, grants of different foundations are also used: the non-governmental foundation operating in the country, The Azerbaijan National Science Foundation; foreign foundations - Civil Researches and Development Foundation of the USA (CRDF), INTAS Foundation of the European Union, etc.

State provides scholarships to the students getting educational at PhD level.

6. Access and admission to the next cycle.

6.1 Access and admission between the first and second cycles.

a) The percentage of first cycle qualifications that give access to the second cycle.

All first cycle qualifications give access to the second cycle.

b) All first cycle qualifications give access to the second cycle.

c) Special requirement for access to a second cycle programme in the same fields of studies is an entrance exam.

6.2 Access and admission between the second and third cycles



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a) The percentage of second cycle qualifications that give access to the third cycle - 97.1%.

b) Some qualifications awarded by Azerbaijan Academy of Physical Training and Sports, as well as qualification of the teacher in secondary school on subject "Physical training and initial military training" do not give access to the third cycle.

7. Employability of graduates/cooperation with employers.

a) Measures that have been taken to enhance the employability of graduates with bachelor qualifications.

A total of 19138 people graduated from the Bachelor level of higher educational institutions in 2007/2008 academic year. 5479 (29%) of this amount are those trained on pedagogical specialties. 2202 of them have been provided with job appointments. as the graduates of other fields of higher education (technical, technological, agricultural, etc.) have not been provided with job appointments, their employment is carried out independently. That is why there are no available statistic data on these fields of specialization.

b) Extent of a dialogue between HEIs and employers on:

- curriculum design, work placements and international experience - some;
- accreditation/quality assurance - a little;
- university governance - a little.

8. Implementation of national qualifications framework

a) Preparation of the national qualifications framework.

The multi-tier model of higher education in the Republic of Azerbaijan has been determined by the Law of the Republic of Azerbaijan on Education. The Cabinet of Ministers of the Republic of Azerbaijan approved the Regulation of the higher education and institutions by its resolution of March 30, 1995 (N72). In the fifth section of the aforementioned regulation this structure is approved by higher standards. Thus, there is the following structure in higher education:

BA - 4 years;

MA - 2 years.

Besides, for a number of medical qualifications a single tier education system is still continued.

b) Generic descriptors for each cycle based on learning outcomes and competences in the framework or in the proposed framework.

The existing structure combines the characteristic features based on learning outcomes for each level and skills of the trainee.

c) ECTS credit range for the first and second cycles.

The structure includes the ECTS credit scores for the first level of higher education. Depending on the qualification BA level students must have at least 200 - 250 credit scores within 4 years.

The first graduation of Bachelor Degree students whose study was conducted using ECTS system will take place in 2009/2010 academic year. Starting from 2010 the ECTS system will be applied for Master Degree students.



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d) Implementation of the national qualification framework (NQF)

The Cabinet of Ministers, Ministry of Education and Ministry of Justice and other ministers, which have their own higher education institutions and the other relevant institutions, have taken part in the development of the structure of the national qualification degrees. The work on the development of the qualifications framework has been started, and its timetable has been prepared, but not yet approved.

e) Stage of progress on the self-certification of compatibility with the EHEA framework.

Self-certification of compatibility with the EHEA framework has not been started yet.

NATIONAL IMPLEMENTATION OF THE STANDARDS AND GUIDELINES FOR QUALITY ASSURANCE IN THE EHEA (ESG)

9. Reviewing the QA system against the ESG and national support for implementation.

a) Review of the national QA system against the ESG.

The national QA system has not been reviewed yet.

9.1 Internal quality assurance in higher education institutions

The internal quality assurance is one of the stages of accreditation of higher educational institution and is implemented by educational institution (the stage of self-analysis). The educational institution sets up a commission for the conduction of a self-analysis procedure. A report is prepared by the commission based on the results of self-evaluation.

The procedure of self-evaluation covers the organizational and legal issues, management of education institution, content and structure of education, evaluation of the organisation of the training process and the quality of training. In this case, the compliance of the activity of the educational institution with requirements of the normative-legal documents approved by the ministry of Education and other administrative authorities, compatibility of the activities of the educational institution to its own regulations, correspondence of training materials prepared at the educational institution to existing legislation, as well as the conformity of the content of education with the requirements of the state standards are evaluated.

The quality of training is also evaluated within that procedure. In this case, the results of semester examinations, graduation papers, teaching staff provision, logistical basis of the higher educational institution, international cooperation, and social conditions are also analyzed.

The relevant report developed on the basis of the aforementioned criteria is submitted to the Board of the higher educational institution for consideration.

a) Some of the HEIs have published a strategy for the continuous enhancement of quality.

b) All HEIs have arrangements in place for the internal approval, monitoring and periodic review of programmes and awards. All higher educational institutions have appropriate procedures for internal approval, monitoring and periodic review of programmes.

c) Some of the HEIs have described their programmes in terms of learning outcomes



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d) Some of the HEIs applied in a consistent way student assessments designed to measure the achievement of the intended learning outcomes (based on published criteria). The evaluation of the knowledge of students is conducted by a respective commission of the higher educational institution by means of written tests. The tests are compiled on the basis of presented subject programs, and the knowledge of students is evaluated on the basis of these tests.

e) Most of the HEIs publish up to date, impartial and objective information about the programmes and awards offered.

10. Stage of development of external quality assurance system

a) The stage of implementation of external assurance system.

Quality assurance in higher educational institutions is conducted through attestation and accreditation. This procedure is conducted on the basis of the international practice.

The attestation of higher educational institutions is the process which determines the compliance of training to state education standards which is the basic from of the public control on quality of education. The attestation commission consists of the experts appointed by the Ministry of Education for each educational institution. The duty of this commission is to implement external quality assurance procedures. The attestation of the educational institution is conducted every 4 years.

Before attestation educational institutions carry out a procedure of self-evaluation. This procedure is implemented by the commission appointed by the order of the head of the relevant higher educational institution. In compliance with the results of investigations a self-evaluation report is developed and submitted to the attestation commission established by the Ministry of Education. During the attestation process the correspondence of content and quality of education to education standards, implementation of curricula and syllabi, level of acquisition of individual subjects by students and the results of state examinations, as well as results of the attestation of the knowledge of students by the commission, scientific, pedagogical, methodological provision of education, employment of the teaching staff, medical-social conditions,, material-technical basis, dynamics of development and other issues are thoroughly studied.

The attestation results are considered to be positive if the knowledge of students is evaluated by the commission is exceeding 50 per cent level. According to the recommendation of the attestation commission, the Ministry of Education issues a respective order on the results of the attestation of the educational institution.

The appropriate order of the Ministry of Education on the attestation of the educational institution is the basis for accreditation of this institution. In case the Ministry of Education issues the positive order on attestation of the educational institution, a number of documents should be submitted to the accreditation commission which reviews the documents and makes relevant decision.

b) External quality assurance system operates at a national level.

c) External quality assurance system covers all higher education.

The following elements are included in external quality assurance system:

- self-assessment;
- external review;



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- publication of results;
- follow-up procedures.

d) A peer review of the national agency according to the Standards and Guidelines for QA in the EHEA has not taken place yet.

11. Level of student participation

Aspects of quality assurance in which students are involved:

- in governance of national agencies for QA - no;
- as full members in external review teams - in some cases;
- as observers in external review teams - yes;
- as part of the decision making process for external reviews (e.g. arrangements for external reviewers to consult with students) - in some cases;
- in internal quality assurance (e.g. periodic review programmes) - yes;
- in preparation of self-assessment reports - yes;
- in follow-up procedures - yes.

12. Level of international participation

There is no international participation in quality assurance in:

- the governance of national agencies for quality assurance;
- the external evaluation of national quality assurance agencies
- teams for external review of institutions or programmes, either as members or observers;
- membership of ENQA;
- membership of any other international network.

At present, quality assurance and external evaluation of higher educational institutions and programmes is implemented by the Ministry of Education. However, in accordance with the State Programme on development of Higher Education for 2009-2013, and independent quality assurance agency will be established in Azerbaijan.

International participation is envisaged for external evaluation of the national quality assurance agency and external review of institutions.

RECOGNITION OF DEGREES AND STUDY PERIODS

13. Stage of implementation of Diploma Supplement

All graduates from the first and second cycles of higher education receive Diploma Supplement.

The Ministry of Education elaborated a new Diploma Supplement based on the model of the Diploma Supplement recommended by the EU/Council of Europe/UNESCO. Starting from 2008 all graduates of the first and the second cycles of higher education can receive this document on request.

a) The Diploma Supplement issued to students graduating from:

- 1st cycle programme;
- 2nd cycle programme;

b) The Diploma Supplement issued:

- in Azerbaijani language;



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- free of charge;
- on request;
- corresponds to the EU/CoE/UNESCO Diploma Supplement format.

13.1 Use of Diploma Supplement for recognition of qualifications

- a) The Diploma Supplement is used as the reference document when admitting holders of foreign qualification to the second and third cycles. While admitting the persons educated abroad to the second cycle of higher education only the legalization of the document on the first level of education is required.
- b) Specific actions have not yet been taken at a National and Institutional level to enhance the use of the Diploma Supplement as a communication tool towards the labour market.

14. National implementation of the principles of the Lisbon Recognition Convention

a) Compliance of appropriate legislation with the Lisbon Convention

The President of the Republic of Azerbaijan issued a decree on the Implementation of the Law of the Republic of Azerbaijan on Ratification of the Convention on the Recognition of Higher Education Qualification in the European Region (March 6, 2000, No.346). In conformity with this Decree the Cabinet of Ministers of the Republic of Azerbaijan adopted the regulations on the recognition of qualification of foreign countries and on determination of their equivalency (May 13, 2003. No. 64). According to these regulations, the recognition of qualifications and documents is conducted by the Ministry of Education of the Republic of Azerbaijan which also issues necessary documents on the recognition of diplomas and qualification.

b) Compliance of appropriate legislation with the later Supplementary Documents:

i) Recommendation on the Criteria and Procedures for Recognition

Appropriate legislation complies with the aforementioned. The procedure of the recognition of qualifications of educational institutions of foreign countries is conducted in conformity with the existing international agreements and recommendations, state standards in education and normative legal acts which regulate the educational system in the Republic of Azerbaijan. Determination of equivalency of qualifications is conducted as it follows:

Conduction of an expertise - it determines the correspondence of the qualification obtained abroad with that of received in the republic of Azerbaijan on the basis of the current standards of education in Azerbaijan.

After the recognition of the qualification received abroad the correspondence of the content of education of the two countries is determined.

ii) Recommendation of the recognition of Joint Degrees

No

iii) Code of Good Practice in the Provision of Transnational Education

No



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c) Applicants have right to fair assessment.

i) Recognition if no substantial differences can be proven

The main factor in this case the positive opinion of experts on the recognition of the qualification and positive expert reference about the correspondence of the content of education, international agreements and conventions supported by the Republic of Azerbaijan in this field, at the same time, the correspondence of requirements on the structure of education in the Republic of Azerbaijan and in the country which issues the document.

ii) Demonstration of substantial differences, where recognition is not granted

The negative decision on the diploma recognition is disclosed in the following cases:

- if the content of the programme differs significantly from that applied in Azerbaijan for the same qualification;
- if foreign higher educational institution which issued document on education has not legal accreditation in its state;
- if forms of study differ (for example: if a foreign applicant received qualification and degree through part-time study, but part-time study for this qualification does not exist in Azerbaijan).

iii) Recognition and information provision is implemented by the Division for recognition of Educational Documents, Ministry of Education.

15. Stage of implementation of ECTS

a) The percentage of the total number of higher education programmes³¹ in which all programme components are linked with ECTS credits - 75-99%. Since 2007 the number of higher educational institutions using ECTS increased to 28 (160 qualifications). At present, ECTS covers 85% of higher educational programmes.

b) In all programmes ECTS credits linked with learning outcomes.

c) Ratio between national and ECTS credits.

The national credit system in Azerbaijan differs from ECTS system in the volume of weekly class-work (number of hours is 30 in Azerbaijan), in ratio between number of class and extra-curriculum hours, (class-work - 30 hours, extra-curriculum work - 15 hours), and in evaluation gradations (below 51 scores - unsatisfactory(F); 51-60 - satisfactory(E); 61-70 - satisfactory(D); 71-80 - good(C); 81-90 - very good B); 91-100 - excellent(A)). In compliance with the aforementioned Regulation 15 weeks per semester are allocated for class-work. Weekly workload for the students constitutes 45 hours, including class-work and extra-curriculum work, on condition that class-work should not exceed 30 hours.

d) Actions that have been taken in order to improve understanding of learning outcomes

In order to interpret the notion of learning outcomes in education higher educational institutions conduct informative measures for the students and their parents.

e) Actions that have been taken in order to improve measurement and checking of student workload.

Learning outcomes are studied and evaluated by the respective bodies of higher schools, registration office, training department, dean's office at each semester.

³¹ Except doctoral studies



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f) Actions taken in order to assist HE staff and other stakeholders in applying ECTS.

To apply ECTS system the teaching staff and other stakeholders are rendered assistance (by means of trainings, seminars, etc.)

LIFELONG LEARNING

16. Recognition of prior learning

a) Nationally established procedures to assess (RPL) as a basis for access to HE programmes.

Document on prior learning is required for the admission to the higher educational programs in Azerbaijan.

b) Nationally established RPL procedures to allocate credits towards a qualification exist.

c) Nationally established RPL procedures to allocate credits for exemption from some programme requirements exist.

The procedure for the recognition of prior learning by exempting the students from the requirements of some programmes is carried out on the basis of provisions of the regulations for estimating the knowledge of students who study based on the credit system.

JOINT DEGREES

17. Establishment and recognition of joint degrees

a) Joint degrees are not specifically mentioned in legislation. The legislation fully allows the establishment of joint programmes. Joint programmes do not lead to awarding of joint degree.

b) An estimate of the percentage of institutions which are involved in:

- joint degrees - 0%;
- joint programmes - 1-25%.

c) The level of joint degree/programme cooperation is little in the first and second cycles and none in the third cycle.

d) Joint degree/programme cooperation most widespread in technical and economic spheres.

e) There are 5 joint programmes.

MOBILITY

18. Removing obstacles to student and staff mobility

a) Measures that have been taken both at governmental and institutional level to enhance student and staff mobility and overcome main obstacles.



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The mobility of students is regulated by the governmental and international agreements. Since 2008 education of the Azerbaijani students in foreign countries is financed by Azerbaijan State Oil Fund. At the same time, the Regulations on selection of students for education abroad was approved by the Decree of the Cabinet of Ministers of Azerbaijan (No. 2, June 03, 2008).

At present, about 6500 students from more than 30 countries study in higher educational institutions of Azerbaijan. It constitutes about 5% of the total amount of students in the Republic. The number of the Azerbaijani citizens studying abroad within the framework of the State Programme is about 200, while the number of students studying abroad on state-supported basis exceeds 900. They study in 25 foreign countries.

b) The arrangements for visas, residence and work permits have not been amended in order to enhance student and staff mobility.

c) There is financial support for national and foreign mobile students and staff.

Financial aid is rendered to the students and teachers studying abroad on state-supported basis. Foreign students from a number of countries (Turkey, China, Egypt, Russian Federation) studying within the framework of intergovernmental exchange programmes receive financial support from the Government of Azerbaijan.

d) Recognition of study periods abroad

Recognition of the study period taken abroad is regulated by the Resolution of the Cabinet of Ministers on the Regulations for Recognition of Higher Education Abroad and Determination of Equivalency (No.64, May 13, 2003).

e) Accommodation for mobile students and staff

The provision of accommodation for foreign students is regulated in conformity with the agreements signed with them and in the majority of cases they are provided with accommodation.

f) Measures have been taken to increase outward student and staff mobility.

THE ATTRACTIVENESS OF THE EHEA AND COOPERATION WITH OTHER PARTS OF THE WORLD

19. Implementation of strategy

a) Strengthening of cooperation based on partnership in higher education.

Azerbaijan has a number of agreements on mutual cooperation in the field of higher education with a number of countries:

- Agreement on cooperation between the Ministry of Education of Azerbaijan and the Ministry of Education of Turkey and Board of Higher Education;
- Agreement between the governments of Azerbaijan and Ukraine on mutual recognition of documents on education, academic degrees and their equivalency;
- Protocol between the Ministry of Education of Azerbaijan and Ministry of Education of the Russian Federation on mutual recognition of qualifications;
- Memorandum between the Ministry of Education of Azerbaijan and Ministry of Science, Research and Technology of Iran on cooperation in the field of education and research;



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- Memorandum of Understanding between the Ministry of Education of Azerbaijan and Ministry of Federal Education, Science and Culture of Austria on the proposals of recognition of qualification in the field of higher educational institutions;
- Agreement among the ministries of Education of GUAM-member states on cooperation in the field of education.

Ministry of Education carries out close cooperation in the field of higher education with major international organizations (Council of Europe, UNESCO, World Bank, UNICEF, UNDP, ETF, ISESCO) as well as with international non-governmental organizations (Education Law and Policy, Open Society Institute, ACCELS, IREX, DAAD).

Cooperation includes policy dialogue, convening joint conferences, seminars and training workshops on issues related to implementation of Bologna Process requirements, exchange of students, faculty members, and researches improvement of the content of education, participation in joint projects.

Among major partners in the sphere of higher education such countries as Turkey, France, Germany, Great Britain, Russian Federation, USA, Japan, should be mentioned.

Policy dialogue with partners from other world regions is conducted through visits of Ministry of Education officials and exchange of official delegation at the Ministry of Education and higher educational institutions level. During the latest years this dialogue has expanded with different countries, including USA, Republic of Korea, Malaysia, Egypt and Israel.

Protocols and agreements on mutual recognition of qualifications and degrees have been signed with Russian Federation, Turkey, Ukraine and Austria.

b) Measures that have been taken in order to implement the OECD/UNESCO Guidelines for Quality Provision in Cross-border Higher Education.

The following UNESCO guidelines have been fulfilled for ensuring the quality of international higher education:

- The accreditation mechanisms of higher educational institutions have been developed and applied;
- The internal and foreign assessment mechanisms for ensuring the quality of education have been developed;
- The regulations for the mutual recognition of diplomas, qualifications and equivalency in the field of higher education have been developed and applied;
- The model of the diploma supplement has been developed on the basis of the one developed by the working group of the European Union, the European Commission and UNESCO/CEPES for ensuring the mobility of students.

FUTURE CHALLENGES

20. Main challenges for higher education

- A new Law on Education is to be approved for creating new legal-normative basis of higher education and new concessions should be determined by the legislation for attracting investors to higher education. The structure of higher education should be renewed and adapted to the requirements of society and economy.
- Activities on elaboration of the training and methodological literature, exemplary curriculum and text books in conformity with the standards of national education should be expanded, necessary measures should be taken for the allocation of finances for this purpose.
- It is necessary to give preferences to democratic principles in the management of higher educational institutions. The participation of students in the management of higher schools should be ensured, public role in the management of education should be increased. The attention of the public should



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be focused on the problems and needs of education. Democratic principles should be widely applied to education process.

- A new list of MA training programmes should be developed.
- The structure of the minimal state requirements to the content and level of the present MA training should be developed; the relevant generation of education standards for different qualifications should be worked out.
- All the normative documents on education (decrees, regulations, etc) should be revised, specified and the existing gaps should be removed.
- The process of attestation and accreditation of higher educational institutions should be sped up.
- Necessary measures should be taken for the recognition of degrees conferred by higher educational institutions of Azerbaijan in the countries which joined the Bologna Process.
- Recognition of the quality assurance mechanism of the Republic of Azerbaijan should be ensured in the countries which joined the Bologna Process.
- The visits of foreign experts engaged in quality assurance in higher educational institutions of Azerbaijan should be provided.
- A database should be created to allow the Azerbaijani experts take part in the international commissions on quality assurance in education.
- The present legislation for ensuring the academic mobility of teachers and students of higher educational institutions should be improved and new legislative acts should be developed.
- A grant system should be created for ensuring the mobility of teachers and students of higher educational intuitions of Azerbaijan.

Source: Bologna Process, National Reports: 2007-2009, 01 November, 2008;



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Annex 6: Bologna Process in Georgia 2007-2009

1. Main developments since London 2007

Since 2007 the following amendments had been introduced into the Law of Georgia on Higher Education:

- National Education Accreditation Centre became the official authority responsible for defining equivalence and authenticity of educational credentials. This function previously was carried out by the Ministry of Education and Science of Georgia. The Agency also serves as Georgian ENIC since 2008. Consequently, the information on HEIs, recognition and mobility issues, quality assurance and accreditation will be accumulated in one institution.
- Foreign citizens, persons without citizenship or Georgians living abroad for more than three years can now be admitted to the accredited HEIs without passing Unified National Admission Exams (previously a mandatory requirement).
- The term - Academic Higher Education Qualifications Framework was replaced by Higher Education Qualifications Framework which encompasses both academic and professional higher education qualifications.
- Accredited HEIs may design and implement joint bachelor, master and doctoral degree education programmes (including programs for certified medical doctor) with foreign HEIs. Previously, joint degrees were not mentioned in the Law.
- Higher professional education programmes had been regulated by the Law. Namely, the status of certified specialist, qualification acquired through professional education programs, admission to the higher professional educational programmes, obtaining state grants, credit accumulation process are addressed through the amendments.
- Students who have completed the first cycle of medical education will have a status of certified medical doctor instead of former status of certified specialist. Second stage of medical education called "rezidentura" was recognized as the second cycle. This process facilitates adaptation of Medical Education to Bologna requirements. State financing within the students' social assistance programs for students enrolled in accredited HEIs was increased from 6% to 10 %.
- Social Worker's academic programmes became regulated academic programmes etc.

Institutional Developments:

- In 2007-2008 institutional accreditation of HEIs, programme accreditation of higher professional education and teachers' professional development programmes had been conducted. Out of 172 HE professional programmes submitted 155 received the accreditation.
- As a result of institutional accreditation conducted in 2007-2008 number of accredited HEIs decreased to 42. By the end of 2008 14 newly licensed HEIs were added to the list having the status of accredited HEIs.
- In cooperation with 43 HEIs a new model of accreditation so called missionbased accreditation was elaborated based on 8 standards and appropriate indicators.
- In 2007 in cooperation with the European and national universities a new model of program accreditation was elaborated based on 6 standards with appropriate indicators.
- In order to facilitate internal mobility of students and staff online registration software was elaborated and complete electronic data-base created. The base is updated online twice a year. Student internal mobility is organised 2 times a year. In 2007-2008 8000 students participated in the mobility schemes.
- Procedures for recognition of qualification of internally displaced persons who have lost their education certificates were elaborated. Councils in specific fields of education were created to assess competences and issue certificates.



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- In 2008 European experts conducted the audit of The National Education Accreditation Centre. The Centre is preparing the self-assessment report for ENQA membership.

TWINING project - The Ministry of Education and Science of Georgia in cooperation with European Commission and EC experts elaborated the project fiche "Capacity Enhancement for Implementing the Bologna Action Lines in Georgia" (CEIBAL) in July 2008. The project is expected to start in 2009 and last for 2 years. The project aims to address an important dimension of Higher Education reform process in Georgia by reinforcing the institutional and professional capacities, and focusing additional support for certain Bologna process action lines, assisting with the validation of the framework for higher education qualifications and its integration in the quality assurance system through assistance to further develop the accreditation system and support to improve the recognition practice across HEIs in Georgia.

2. Partnership

The Ministry of Education and Science of Georgia oversees implementation of the Bologna Process in Georgia. In 2007-2008 within the Programmes Division a special program was elaborated that envisaged monitoring the implementation of the Bologna Process in the country. In 2008 as a result of structural changes a separate unit responsible for overseeing Bologna Process was established - Higher Education Harmonization and International Integration Division. Within the framework of Tempus project Bologna experts group was established. The experts participated in various international conferences on the Bologna process and held information and training seminars in the capital and the regions of Georgia.

National working group for Bologna follow-up include representatives of Ministry, National Quality Assurance Agency and independent experts. Bologna promoters' group include representatives of Ministry, Academic staff, Students, Staff trade unions.

There is no Rectors Conference representing all HEIs established in Georgia so far. Instead, academic staff individually represents the HEIs in the Bologna Promoters Group.

DEGREE SYSTEM

3. Stage of implementation of the first and second cycle

- a) The progress made towards introducing the first and second cycles.

Currently, all accredited higher education institutions (56) have fully shifted to the three cycle degree system. Exception is the medical education which exists in one cycle format. Besides 14 accredited HEIs along with the three cycle programs are still implementing "old" one cycle programs which will be completely eliminated by the end of 2010.

- b) Total number of all³² students below doctoral level enrolled in the two cycle degree system in 2008/09.

Total number of all students below doctoral level	Number enrolled in the two cycle degree system in 2008/09	% of all students enrolled in the two cycle degree system in 2008/09
82 313	22 388	27%

³² „All“ = all students who could be involved in 2 cycl system, i.e. not those in doctoral programmes and not those in short HE programmes. Students of all study fields are taken into account.



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c) Current situation regarding implementation of the two cycle system

Currently 60 % of HEIs have bachelors, masters and doctoral education programmes. 12 % implement solely first cycle programs, 84 % implement MA degree programs. In line with the current legislation bachelor degree programmes encompass 240 credits (ECTS), master's degree programs - 120 credits. For obtaining master's degree completing research thesis is mandatory.

4. Stage of implementation of third cycle

The progress made towards implementing doctoral studies as the third Bologna cycle:

- Doctoral students constitute 2% of all students. All of them are enrolled in universities. In 2007-2008 940 students were admitted to doctoral programmes consisting 65% of total number of doctoral students.
- Length of doctoral program may not be shorter than three years, but legislation makes the main emphasis not on their duration, but the scope of the program. Length of doctoral studies ranges from 3 to 10 years. Normal length is 3 years.
- Apart from independent research which is the main component of all doctoral studies taught courses are included in certain programs (It is not mandatory in 10% of HEIs). The most spread components are teaching activities (85 %) and development of general (transferable) skills (75%). Both are mandatory in almost all cases.
- The supervisory and assessment procedures for doctoral studies exist in 90 % of HEIs. Three main components of assessment are:
 1. Preliminary assessment of level of doctoral students which is conducted through selection procedures (testing of candidates, interview, exam in foreign language) (Exists in 1/5 of HEIs).
 2. Quality of teaching and research is assessed through (i) mid-term and final exam, (ii) evaluation of seminar participants in 60 % of HEIs, (iii) supervision of doctoral programs and (iv) validity of syllabus structure.
 3. Content of Doctoral thesis and quality is one of the main indicators for assessment of doctoral degree programs. Besides, majority of HEIs consider scientific articles published in international peer-reviewed journals as an important indicator.
- Doctoral Degree Programs are implemented in 31 accredited HEIs. Solely in 2 of them ECTS is not used for defining the workload of doctoral students (According to the law "on higher education" doctoral programs must consist of no less than 180 credits).
- Generally, doctoral students have a status of a student in Georgia, although according to the current legislation doctoral student can also be elected on the position of assistant -professor. According to HEIs the status of doctoral students varies. Majority consider them as students (71%), fewer HEIs consider doctoral students as researchers (17%) and assistant professors (10%).

5. Relationship between higher education and research

a) The main trends in the role of higher education institutions in research.

In Georgia research activities in HEIs should be consistent with their mission - master's and doctoral degree programs must include the research component. master's and doctoral degree programs are implemented in 84% of HEIs thus research play an important role in HEIs of Georgia. Despite the requirements of the law, in fact presently research component in Georgian HEIs is still underdeveloped. e.g. only 8,8% of accredited HEIs participate in scientific grants competitions announced by the Georgia National Science Foundation. As for private HEIs, they mainly focus on study fields most demanded on



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the labour market - such as Business Administration and Law, whilst fundamental sciences are almost ignored. Private HEIs benefit from national research funds two times less than public HEIs.

b) Percentage of GDP spent on research from public and private funds

Percentage of GDP spent on research in Georgia is:

- From public funds - 0,18% (this includes: direct state funding of scientific research institutes, grants provided by state foundations, research funding within universities etc.)
- No specific data is available on financing research from private sources. Although there are concrete cases of business sector financing specific research projects or stimulating research development within HEIs.

In total national expenditure on research constitutes:

- Public funds:
66 scientific research institutes received 14 mln GEL in 2008 Georgian National Science Foundation (www.gnsf.ge) - 10,5 mln GEL Rustaveli Foundation (Foundation for Georgian studies, Humanities and Social Sciences) (www.rustaveli.org.ge) - 2,9 mln GEL.
- Private funds:
In 2007 from donor organizations 14-16 mln GEL was raised for funding research in scientific research institutes as well as HEIs and organizations (nongovernmental).

Details of the funding mechanism for doctoral students: according to the Law of Georgia on Higher Education (Article 88) Ministry of Education and Science of Georgia should elaborate new rules and conditions for financing master's and doctoral programmes. Presently, the process is underway. However, financing doctoral students through scholarships is envisaged in the budget of 2009. Namely, 720 000 GEL will be allocated for students with higher academic excellence. Scholarship will at least partially cover the tuition fee. Candidates for scholarship will be presented by the universities. Currently, majority of doctoral students (90%) self-finance their studies, in 30% of HEIs doctoral studies are free of charge. Other sources of financing are research grants, sponsorship etc.

6. Access and admission to the next cycle

6.1 Access and admission between the first and second cycles

a) The percentage of first cycle qualifications that give access to the second cycle.

Bachelor degree holder and certified specialist (having equal status to BA) may advance to master's level. Additional conditions for access may be set by the HEIs themselves. According to the decision of the Ministry of Education and Science of Georgia Unified Master's Exams have become mandatory, but is not the only procedure for admission at the second cycle. The first Unified Master's Exams are planned to be held in 2009. The exams will become obligatory for admission at masters degree programs in all HEIs. In Georgia, normally 50 % of graduates having bachelor's degree advance to the second cycle.

b) According to the Law of Georgia on Higher Education all HE qualifications give access to the second cycle in Georgia. There are no field restrictions for access between cycles. HEIs may establish additional requirements but until now such cases could not be detected. The second cycle can be considered as an instrument to change the field of study as well.

c) Special requirement for access to a second cycle programme in the same fields of studies is an entrance exam and in some cases it would be necessary to complete additional courses.



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d) Special requirement for access to a second cycle programme for students coming from other fields of studies is an entrance exam and in some cases it would be necessary to complete additional courses.

6.2 Access and admission between the second and third cycles

a) The percentage of second cycle qualifications that give access to the third cycle.

According to the Law of Georgia on Higher Education a person holding master's or equal degree may take a doctoral program. All second cycle qualifications give access to the third cycle.

Lack of financial resources is considered as the main obstacle between cycles. Scholarship program for successful students in 2009 is considered as one of the main measures for removing the obstacle.

7. Employability of graduates/cooperation with employers

a) Measures that have been taken to enhance the employability of graduates with bachelor qualifications.

85 % of HEIs are taking various measures to enhance the employability of graduates such as cooperation agreements with private business for employing and providing internship for the graduates, organizing informational meetings with the potential employers. 27 % of HEIs organize informational meetings, 10 % has dialogues with employers on curriculum design, 9-11 % conduct labour market research.

Higher professional educational programmes had been introduced in Georgia in 2007. So far there are no graduates from professional programs since the first cohort of students admitted at higher professional programmes have not completed their studies yet. The data on employability of professional higher education students will not be available before 2010-2011 academic years.

b) Extent of a dialogue between HEIs and employers on:

- curriculum design, work placements and international experience - some;
- accreditation/quality assurance - a little;
- university governance - some.

8. Implementation of national qualifications framework

a) Preparation of the national qualifications framework.

The general overview of the National Qualifications Framework was elaborated in autumn 2007. The draft was posted on the official website (<http://mes.gov.ge/upload/editor/file/Boloniis%20Procesi/NQF-%20GE%20-%202005.pdf>) of the Ministry of Education and Science of Georgia.

b) Generic descriptors for each cycle based on learning outcomes and competences in the framework or in the proposed framework.

Dublin descriptors were taken as a basis for generic descriptors.

c) ECTS credit range for the first and second cycles.

d) Implementation of the national qualification framework (NQF)



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NQF is implemented through a special program of the Ministry of Education and Science of Georgia. National NQF correspondent was nominated by the Ministry in 2008. The timeline for all arrangements including the self-certification process is envisaged by the programme. By 2009-2010 the draft will be finalised, approved and self-certified. A special EC funded ENPI Twinning project called " Capacity Enhancement for Implementing Bologna Action Lines in Georgia (CEIBAL)" envisages finalizing the self-certification process together with Germany in 2010.

e) Stage of progress on the self-certification of compatibility with the EHEA framework.

Self-certification of compatibility with the EHEA framework has been started but has not been completed yet.

NATIONAL IMPLEMENTATION OF THE STANDARDS AND GUIDELINES FOR QUALITY ASSURANCE IN THE EHEA (ESG)

9. Reviewing the QA system against the ESG and national support for implementation

a) Review of the national QA system against the ESG.

The national QA system has not been reviewed yet.

9.1 Internal quality assurance in higher education institutions

Quality assurance services at higher education institutions are established according to the law of Georgia on Higher Education with the purpose to ensure systematic evaluation of study and research activities of the higher education institution.

Functions of quality assurance services at public HEIs are clearly defined by the law on higher education. The same functions are carried out by the quality assurance services in private HEIs. Number of QA service staff members range from 1-22. In 90% of HEIs quality assurance services have their statutes.

The main functions of quality assurance services at HEIs are: regulation of curriculum and syllabus design, elaboration of unified forms for conducting students surveys, credit recognition and mobility procedures, self assessment procedures for academic staff, ensuring favorable study environment. The QA Services provide assistance in establishing credit transfer and accumulation system through training programs or additional instructions. Incentives for improving the quality of education and research exist in 70 % of HEIs, main emphasis is made on student rating- based bonus, less attention is paid to incentives for academic staff.

a) Most of the HEIs have published a strategy for the continuous enhancement of quality.

b) Most of the HEIs have arrangements in place for the internal approval, monitoring and periodic review of programmes and awards. 62 % of HEIs have elaborated the following documents for overseeing study process: rules for approval of programmes and diplomas, monitoring, periodic review. Only four institutions do not have unified form of program design, two others don't have competence section, the rule for program approval does not exist only in one HEI.

c) All HEIs have described their programmes in terms of learning outcomes



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d) Most of the HEIs applied in a consistent way student assessments designed to measure the achievement of the intended learning outcomes (based on published criteria). Establishment of ECTS system envisages measuring the achievement of students based on well-defined and widely accepted criteria. The syllabus must include student assessment criteria - as well as learning outcomes' section - this has been defined as the main criteria for obtaining institutional accreditation for HEIs. The main tools of measuring students workload and assessment are: students surveys (30%), analysis of achievement (13%), additional instructions elaborated (70%).

e) Most of the HEIs publish up to date, impartial and objective information about the programmes and awards offered.

Curricula and specific syllabi/program annotations should be published on the web-page of HEIs - this is the requirement for institutional accreditation. 84 % of HEIs have posted their programmes on their web-sites, though their scope differs according to the institutions. Besides, relevant information on results of research conducted by quality assurance services is published periodically on the web-sites of the universities. Recently National Education Accreditation Centre conducted evaluation of HEIs self assessment reports. It is mandatory to ensure publicity of the results.

10. Stage of development of external quality assurance system

a) The stage of implementation of external assurance system.

National Education Accreditation Center is in charge of implementing external quality assurance system. As of november 2008 the following steps had been taken:

- Two stages of institutional accreditation of HEIs completed (2006-2007)
- Accreditation of all professional HE programmes held
- Analysis of annual self assesemt reports of HEIs underway. Results had been presented on the national congress of universities by the end of December, 2008.
- New criteria for institutional accreditation are elaborated.
- Conditions for program accreditation of regulated professions are being prepared.

b) External quality assurance system operates at a national level.

c) External quality assurance system covers all higher education.

The following elements are included in external quality assurance system:

- self-assessment;
- external review;
- publication of results;
- follow-up procedures.

d) A peer review of the national agency according to the Standards and Guidelines for QA in the EHEa took place on the 25th November, 2008.

11. Level of student participation

Aspects of quality assurance in which students are involved:

- in governance of national agencies for QA - yes; the Council of National Education Accreditation Centre includes the student representative
- as full members in external review teams - yes;



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as observers in external review teams - no; students are not involved as observers in external review as position of observers in external review is not envisaged by statute of National Education Accreditation Centre. Students regularly participate in assessment of programs, study process and academic staff.

- as part of the decision making process for external reviews (e.g. arrangements for external reviewers to consult with students) - yes;
- in internal quality assurance (e.g. periodic review programmes) - yes;
- in preparation of self-assessment reports - in some cases;
- in follow-up procedures - in some cases.

12. Level of international participation

There is international participation in quality assurance in:

- the external evaluation of national quality assurance agencies
- membership of any other international network.

Georgia became the governmental member of the European Quality Assurance Register (EQAR) in 2008.

RECOGNITION OF DEGREES AND STUDY PERIODS

13. Stage of implementation of Diploma Supplement

According to current legislation it is mandatory for all HEIs to issue a diploma on completion of each education cycle together with a standard supplement. Respective Decree and sample of the diploma supplemented is posted on the official web-site of the ministry (www.mes.gov.ge). Currently all HEIs issue diploma supplement free of charge. Some of them in terms of their autonomy do not issue diploma supplement automatically but upon request. No accurate statistical data is available about the percentage of graduates receiving DS in 2009. All students are entitled to acquire it, thus presumably 100% of graduates will receive it.

a) The Diploma Supplement issued to students graduating from:

- 1st cycle programme;
- 2nd cycle programme;
- 3rd cycle programme.

b) The Diploma Supplement issued:

- in English language;
- free of charge;
- automatically;
- corresponds to the EU/CoE/UNESCO Diploma Supplement format.

13.1 Use of Diploma Supplement for recognition of qualifications

a) The Diploma Supplement is used as the reference document when admitting holders of foreign qualification to the second and third cycles.

b) Specific actions have not yet been taken at a National and Institutional level to enhance the use of the Diploma Supplement as a communication tool towards the labour market.



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14. National implementation of the principles of the Lisbon Recognition Convention

a) Compliance of appropriate legislation with the Lisbon Convention

Recognition of education documents in Georgia is regulated by the Law of Georgia on Higher Education (Clause 1. Art. 50): The recognition of study programs taken in a foreign higher education institution and the results of academic achievement shall take place if the compatibility of such programmes with the Georgian HEIs study program is established.

b) Compliance of appropriate legislation with the later Supplementary Documents:

i) Recommendation on the Criteria and Procedures for Recognition

The Parliament of Georgia ratified LRC and its complementary documents in 1999. All HEIs in Georgia are obliged to follow the procedures as the international agreements stand above the national legislation in Georgia.

ii) Recommendation of the recognition of Joint Degrees

HEIs are autonomous and they can choose the procedures for recognition. Joint degrees had been regulated by law recently; presently there are no impeding obstacles for HEIs at National level to recognize joint degrees.

iii) Code of Good Practice in the Provision of Transnational Education

Yes

c) Applicants have right to fair assessment.

i) Recognition is granted if no substantial differences can be proven

ii) Recognition is not granted if substantial differences can be proven

iii) Information is provided in the DS as well as by the Georgian ENIC. Majority of the HEIs have the information about the programmes and institutions posted on the website.

iv) National Education Accreditation Centre which represents Georgian ENIC is responsible for assessment of equivalence and authenticity of education documents prior to their recognition by Higher Education Institutions.

15. Stage of implementation of ECTS

a) The percentage of the total number of higher educational programmes³³ in which all programme components are linked with ECTS credits - 100%.

Decree of the minister No. 3 (05.01.2007) explains in detail the rules for establishing and using ECTS. Establishment of ECTS system is one of the main requirements for institutional accreditation in 2006. Presently in 100% of accredited HEIs the ECTS system is established.

b) In all programmes ECTS credits linked with learning outcomes.

³³ Except doctoral studies



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c) Actions that have been taken in order to improve understanding of learning outcomes.

The series of trainings to improve understanding of learning outcomes had been conducted within the framework of University Curriculum Development Program and Tuning project of the Ministry of Education and Science of Georgia. Also, non-governmental organizations in cooperation with international partners conducted trainings at HEIs independently with the assistance of internal QA services.

d) Actions that have been taken in order to improve measurement and checking of student workload.

Measuring student workload and assessment process is achieved differently in different HEIs. e.g. 30% of HEIs consider student testing/examining as a major means for assessing and checking student workload; 13% identified analysis of academic success; in 7% additional definitions and instructions had been elaborated. Majority of students and staff support multi-component checking system since it enables more impartial assessment process. However, in frequent cases such assessment causes problems with balancing different components and attaching different weight to different aspects, thus diminishing the motivation of students.

e) Actions taken in order to assist HE staff and other stakeholders in applying ECTS.

In 2008 several training seminars had been held in accredited HEIs of Georgia about how to apply ECTS. Also Tuning project and curriculum development programme of the Ministry assist HEIs in understanding and applying ECTS.

LIFELONG LEARNING

16. Recognition of prior learning

a) Nationally established procedures to assess (RPL) as a basis for access to HE programmes.

Universities are free to assess the PRL. NEAC acts as an official institution at national level in charge of assessing PRL for access to HE programmes.

b) Nationally established RPL procedures to allocate credits towards a qualification exist.

According to the Minister's Decree No. 120 (16.02.2007) "credits acquired by the person in terms of programmes of HEI which are accredited according to the current legislation, prior to his admission to the institution, can be recognized by the institution where person continues or starts studying."

c) There are not nationally established RPL procedures to allocate credits for exemption from some programme requirements.

Passing the Unified National Admission Exams is the only precondition for admission to higher education degree programmes. According to Decree N120 (16.02.2007) of the Minister of Education and Science of Georgia, credits accumulated by a person at an accredited HEI before being enrolled at another HEI may be recognised by the HEI where the person continues or starts studying. Mobility of students among universities is regulated by these rules. HEIs have their own procedures that define the compatibility of competences with concrete educational programmes and accordingly they may recognise or allocate credits.



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JOINT DEGREES

17. Establishment and recognition of joint degrees

a) Joint degrees are specifically mentioned in legislation. The legislation fully allows the establishment of joint programmes and awarding of joint degrees.

b) En estimate of the percentage of institutions which are involved in:

- joint degrees - 1-25%;
- joint programmes - 25-50%.

c) The level of joint degree/programme cooperation is little in all three cycles.

d) Joint degree/programme cooperation most widespread in Business, Law, Pharmacy, Applied Biology, Medicine, European Studies, European Research, American studies, Economics, German Studies, Industry, Romanist, Banking, Phylosophy, Social Worker.

e) There are 51 joint programmes.

According to recently introduced amendment to the law of Georgia on Higher Education HEIs , including the HEIs from abroad may implement BA, MA and doctoral joint degree programmes in all areas of study.

Universities take encouraging measures independently within their autonomy.

- The following types of encouraging measures exist:
- Financial support (in 4% of HEIs)
- Creating Technical Conditions (4%);
- International Agreements (31%);
- Exchange programs, conferences (17%);
- External expertise of programmes (9%).

MOBILITY

18. Removing obstacles to student and staff mobility

a) Measures that have been taken both at governmental and institutional level to enhance student and staff mobility and overcome main obstacles.

By the initiative of the Ministry of Education and Science of Georgia amendments had been introduced to the law of Georgia on higher education in 2008. According to these amendment, a citizen of foreign country alongside with persons without citizenship, also citizens of Georgia living abroad at least for 3 years who have obtained complete general education or equivalent to it or those who study in accredited HEIs abroad may enter HEIs in Georgia without passing Unified National Admission Exams, but through the rules established by the Ministry of Education and Science of Georgia and NEAC. This amendment will significantly facilitate access to HE for citizens living abroad. At institutional level HEIs establish bilateral or multilateral cooperation with foreign HEIs envisaging mobility schemes. 65 % of HEIs take measures to ensure mobility of students and academic staff. 60% of HEIs provide financial support to students and academic staffs, 30% provide accommodation. Among other supporting measures, the HEIs outlined: providing information to students and staff on mobility opportunities, intensive foreign language courses, official agreements signed with partner universities and scientific-research centers, exchange



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programmes for students and academic staff, student's joint conferences, membership to international higher education networks.

b) The arrangements for visas, residence and work permits have been amended in order to enhance student and staff mobility.

In Georgia there are no visa or other kind of obstacles for European students and staff . For EU citizens there is a visa-free regime. As a result of intensive diplomatic effort between Georgia and the EU decision from the EU side was made to start negotiations on Visa Facilitation Agreement. The government of Georgia elaborated a list of categories to be included in the Visa Facilitation Agreement. The list include students, researchers and staff and it was sent in advance in November 2008.

c) There is financial support for national and foreign mobile students and staff.

The President of Georgia initiated a graduate student support scheme that is administered by the Development and Reforms Fund (www.drf.org.ge). The programme envisages financing MA studies at leading universities abroad. The programme was launched in 2005 and in 2007-2008 about 90-160 Georgian master students got the financing for studies abroad from 2 mln GEL earmarked for the programme. The programme mostly covers the following fields: Law, Business Administration, Economics, International Relations, Architecture, Urban Management, Media and Communications, Public Administration. Since 2008 by the initiative of the government of Georgia, the Ministry of Education and Science of Georgia together with the 5 local private banks launched subsidized graduate student loan program to study abroad. The loan is given without loan security for 3 years grace period, for 10 years repayment period 9% interest rate annually. 60 students could continue studies at MA level at European and American HEIs mainly in Business Administration, Finances and Law. The annual budget for the programme is 6 mln GEL, half of which was allocated from the Budget of the Ministry of Education and Science of Georgia and the other half by the leading banks. After 6 months since the programme started up to 2,5 mln GEL was spent for 60 students. The government is planning to increase the program budget for the next 4 years by approximately 20% each year. Since 2009 the US Embassy in Georgia launches 3 -year programme together with the Ministry of Education and Science of Georgia. One of the goals of the programme is to send post docs to the leading US universities with the purpose to pursue research activities. The government co-finances the programme with a total budget of 100 000\$. International and donor organizations also play an important role in providing financial support to national and foreign students and staff through different mobility schemes and exchange programmes. They are:

- Junior Faculty Development Program (JFDP)
- Bureau of Educational and Cultural Affairs (ECA) of the U.S. Department of State
- WHO
- EC Erasmus Mundus and Erasmus Mundus External Cooperation Windows (LOT 5)
- Open Society Georgia Foundation
- Georgia " FDF Programme
- Irish Aid
- TEMPUS
- DAAD
- Fulbright Programme
- British Council
- IREX
- American Council
- EC project(TACIS): „Institute of European Studies" International Education Centre



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- UN Development Fund
- World Bank Project "International School of Economics"
- USAID

d) Recognition of study periods abroad

Study period spent abroad i.e. accumulated credits are recognized by all HEIs within their autonomy once the authenticity of educational credentials is attested by the Georgian ENIC/NEAC. Leading HEIs have already elaborated their internal procedures.

e) Accommodation for mobile students and staff

About 30% of HEIs provide accommodation for students and staff. In most cases international students and academic staff resolve accommodation issue individually. Some of the universities (Tbilisi State Medical University) have accommodations for students, but they are mainly used by internally displaced persons. Several private universities started building student dormitories. The state plans to build student and staff dormitories within the framework of the programme "Knowledge City". The programme starts in 2009.

THE ATTRACTIVENESS OF THE EHEA AND COOPERATION WITH OTHER PARTS OF THE WORLD

19. Implementation of strategy

a) Measure that have been taken in order to implement the strategy "European Higher Education in a Global Setting".

The Ministry of Education and Science of Georgia cooperates with countries outside the Bologna Process through bilateral agreements and international projects. Georgia has cooperation programmes with the US, Japan, China, Israel, Iran etc. In 2008 the Ministry planned to elaborate "The Strategy for International Cooperation" that would envisage all the main directions and recommendations of the strategy "European Higher Education in a Global Setting". Unfortunately, due to the August events in Georgia, the budget of the Ministry was curtailed and many activities could not be implemented including the strategy. Elaboration of the strategy was postponed for the year 2009.

b) Strengthening of cooperation based on partnership in higher education.

Georgia supports persistent interest of many countries outside the Bologna Process and assists them in obtaining the possibility to participate in the Process. In Georgian universities the number of students from outside Bologna Process is quite high. Students arrive from India, Pakistan, South America etc.

b) Measures that have been taken in order to implement the OECD/UNESCO Guidelines for Quality Provision in Cross-border Higher Education.

In 2006 independent National Education Accreditation Centre was established. The Centre actively cooperates with countries globally and acts as Georgian ENIC. The specialities in Georgia are adjusted to the UNESCO classifier and were approved by the Ministerial decree. The NQF to be adopted in 2009-2010 will incorporate all qualifications issued in Georgia.



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FUTURE CHALLENGES

20. Main challenges for higher education

The Challenges related to the implementation of the Bologna Process may be divided into several subgroups:

1. The limited time to implement the reforms and very rapid pace of introducing the Bologna principles; officially, Georgia became the part of the Bologna Process in May, 2005 (although basic requirements of the Bologna Process had been reflected in the Law of Georgia on Higher Education earlier in 2004). In comparison to other countries Georgia started implementing reforms at a later stage with harder starting conditions whilst the timeline for achieving the goals is the same for everyone.
2. Not all stakeholders have understood thoroughly the essence of the Bologna Process - even today many of them have very general information about implications of the Bologna Process. For example majority of university professors still do not fully realize the core essence and major goals of the Process although they possess the methodology, e.g. on how to introduce the ECTS system, but they do it in formal way. Many of them wrongly interlink implementation of the Bologna process with such sensitive issues as e.g. reducing the university staff. The information about the Bologna Process is still top-down while still much needs to be done at grassroots level.
3. Lack of resources - both financial and intellectual. Experts underline the lack of educational managers, who will undertake implementation of the Bologna reforms at university level. Lack of financial resources provokes non-competitive environment - universities can hardly attract highly qualified specialists that is respectively reflected on the quality of teaching and research.
4. Lack of information about the higher education system of Georgia and consequently and lack of trust from European colleagues;
5. Low level involvement of social partners: existing gap between academic and professional worlds; lack of horizontal links between universities; Perspectives for implementing Bologna Process in Georgia Clearly formulated priorities and implementation of well-defined action plan is a precondition for successful implementation of the Bologna Process in Georgia. Apart from sufficient financial resources, it is necessary to raise awareness of all stakeholders implying not only providing information but also fully understanding the process.

Respondents of the survey identified several action lines for successful implementation of the Bologna Process:

1. Elaboration of Higher Education Strategy and clearly defining vertical and horizontal links;
2. Intensive cooperation with the European counterparts: internationalization of processes, namely:
 - Increasing the quality of involvement of foreign professors in educational processes;
 - Elaborating joint programmes;
 - Implementing joint research projects;
 - Participation of international experts in quality assurance issues;
 - Increasing mobility of students and staff in both directions;
 - Implementing programme accreditation as a guarantee for quality higher.

Concluding Remarks

Alongside with the existing challenges and difficulties significant progress has already been achieved: the existing legislation creates solid basis for implementing all the action lines of the Bologna Process; 3-cycle degree system is introduced in all HEIs of Georgia; In all HEIs student workload is calculated in terms of ECTS at BA and MA levels and in majority of HEIs at doctoral level; Diploma Supplement is issued. It is necessary to elaborate detailed mechanisms for granting joint degrees and improve the procedures for recognition of learning periods. Also, there are explicit problems in effective



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implementation of the Bologna principles: HEIs follow the requirements; introduce new mechanisms but there are very rare cases of comprehending thoroughly the necessity of these changes, at least majority of stakeholders could not explain why they are introducing these changes. The impression is created that Bologna principles are implemented by HEIs mostly because they are vital for institutional accreditation. External provisions and formal rules are kept but the process lacks essential comprehension and real quality control mechanisms. Universities should become more autonomous in elaborating quality enhancement strategies and in implementing them. At this stage they still expect instructions from the Ministry. The process is not bottom-up yet. In the process of external quality assurance the involvement of social partners and other stakeholders should increase. At this stage student self-governance is less effective, there are no rectors and professors associations, there is lack of dialogue between HEIs, peer review mechanism is still under-developed, horizontal contacts should become really effective and the process of involvement of all stakeholders should become transparent.

The study programmes mostly do not reflect the labour market requirements partly because the dialogue with the professional side is less effective, partly because the professional side in its part can not clearly formulate its needs. The links between the academic and professional worlds should increase. There is less work towards career planning and guidance - HEIs do not work with their potential students in this direction and entrants possess insufficient information about programmes and employment perspectives. Consequently, students concentrate in one or two field areas; HEIs still do not have well-formulated missions and visions. The research potential at HEIs should be significantly improved. Significant steps should be taken towards internationalization of quality improvement processes (both at institutional and national levels). At this stage it is crucial that NEAC becomes the member of EQAR and ENQA. Involvement of foreign experts in internal quality provision processes (at institutional level) will also significantly contribute to increasing transparency and trust towards higher education system of Georgia.

Source: Bologna Process, National Reports: 2007-2009, 01 November, 2008;



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Annex 7: Bologna Process in Ukraine 2007-2009

1. Main developments since London 2007

Since London 2007 in the system of higher education of Ukraine the following main developments relating to the Bologna process have taken place:

- by the order of the Ministry of Education and Science of Ukraine No.162 of July 13, 2007 there was approved an Action Plan "On quality assurance for higher education of Ukraine and its integration into the European and world educational community for the period until 2010";
- a draft of the Law of Ukraine "On amendments to the law of Ukraine "On Higher Education"" has been prepared taking into account Bologna provisions and recommendations;
- there was introduced the system of ranking of higher education institutions (HEIs) of Ukraine (September 2007);
- Ukraine became a governmental member of the European Quality Assurance Register (EQAR) (April 2008);
- Ukrainian Association of Student Self-government (UASS) became a member of the European Student's Union (December 2007);
- by the order of the Ministry of Education and Science of Ukraine No.602 of July 03, 2008 there was established a working group on the development of the National Qualifications Framework (NQF) for higher education. Consultations to design its profile, level descriptors, credit ranges are being held.

2. Partnership

In December 2008 the Ministry of Education and Science of Ukraine established a structure to facilitate support, advice and coordination of HEIs' activities on implementation of the Bologna Process. By the decision of the Cabinet of Ministers of Ukraine as of 2005 there was created a public Interdepartmental Bologna Follow up Commission headed by the Minister of Education and Science of Ukraine.

National Bologna follow-up group and national Bologna promoters' group includes representatives of Ministry, Rectors' conference, Academic staff, Students, Staff trade unions, National Quality Assurance agency, Employers.

DEGREE SYSTEM

3. Stage of implementation of the first and second cycle

a) The progress made towards introducing the first and second cycles.

The two-cycle system was implemented to all higher education institutions except for training specialists in the fields of medicine and veterinary medicine.

b) Total number of all³⁴ students below doctoral level enrolled in the two cycle degree system in 2008/09

Total number of all students below doctoral level	Number enrolled in the two cycle degree system in 2008/09	% of all students enrolled in the two cycle degree system in 2008/09
2,372,462	2,372,462	100%

³⁴ „All“ = all students who could be involved in 2 cycle system, i.e. not those in doctoral programmes and not those in short HE programmes. Students of all study fields are taken into account.



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c) Current situation regarding implementation of the two cycle system.

At present consultations are being held by stakeholders (Higher Education Institutions, employers, trade unions, Ministry of Education and Science, etc.) to consider the expediency of inclusion of professional and academic Bachelor and Master into a national qualifications framework for higher education in Ukraine.

4. State of implementation of the third cycle

The progress made towards implementing doctoral studies as the third Bologna cycle:

Mechanisms of implementation of the third cycle are being elaborated:

- the percentage of the third cycle students following structural doctoral programmes in comparison with the second cycle graduates is 3%;
- the normal length of full-time doctoral studies is 3 years;
- doctoral study programmes include both taught courses (lectures, seminars, practical work) and independent research;
- the supervisory and assessment procedures for doctoral studies are being developed;
- doctoral studies are planned to be included in the national qualifications framework for higher education and linked to learning outcomes;
- doctoral studies are interdisciplinary and facilitate development of transferable skills. The principles of continuity and succession of training courses are realized at the second and the third cycles;
- the ECTS credits are planned to be introduced in measuring workload;
- doctoral students have the status of both students and early stage researchers.

5. Relationship between higher education and research

a) The main trends in the role of higher education institutions in research.

In Ukraine there are more than 360 higher education institutions of different forms of property and departmental subordination that carry out research and technological activities. More than 60% of higher rank researchers work in the system of higher education. The state target research and technical and social programme "Research in Universities" for 2008-2012 has been elaborated.

b) Percentage of GDP spent on research from public and private funds

Higher education institutions co-operate with branch and factory research. According to the State Statistics Committee of Ukraine expenditure of the enterprises of Ukraine on research makes 1.2% of their total expenditure. Funding for doctoral students is carried out through state budget.

6. Access and admission to the next cycle

6.1 Access and admission between the first and second cycles.

a) The percentage of first cycle qualifications that give access to the second cycle.

All qualifications of the first cycle give access to several programmes of the second cycle.

b) Special requirement for access to a second cycle programme in the same fields of studies is an entrance exam.



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6.2 Access and admission between the second and third cycles

a) The percentage of second cycle qualifications that give access to the third cycle.

All qualifications of the second cycle give access to at least one programme of the third cycle.

b) All qualifications of the first cycle give access to several programmes of the second cycle, and all the following ones give access to at least one programme of the third cycle practically without any bridging courses.

7. Employability of graduates/cooperation with employers

a) Measures that have been taken to enhance the employability of graduates with bachelor qualifications.

A draft decision of the Cabinet of Ministers of Ukraine 'On the procedure of employment of higher education graduates' and draft law of Ukraine 'On the involvement of employers to training and retraining of staff, to educational and research processes' has been prepared to enhance the employability of graduates of all cycles.

To the employability of graduates also contribute:

- higher education institutions, most of which concluded agreements with employers;
- career service centers;
- special centers of student self-government;
- centers of the state employment service;
- professional unions of manufacturers;
- association of employers of Ukraine.

Employability data for graduates of all cycles of 2007/2008 academic year are as follows:

- bachelors - 14.4%;
- the percentage of the first cycle graduates who continued into the second or third cycles is 81%;
- masters - 57%.

At present in Ukraine higher education institutions provide only professional bachelor programmes.

b) Extent of a dialogue between HEIs and employers on:

- curriculum design, work placements and international experience - a little;
- accreditation/quality assurance - a little;
- university governance - a little.

8. Implementation of national qualifications framework

a) Preparation of the national qualifications framework.

Decision to start the process of the development of the NQF of Ukraine was taken by the Ministry of Education and Science in May 2008 after the seminar on the NQF organised and held under support of the Council of Europe in Kiev. By the order of the Ministry of Education and Science of Ukraine there was established a working group on the development of the NQF; its first meeting was held in July 2008 where stakeholders (Higher Education Institutions, Rectors' Conference, Ministry of Labour and Social



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Policy, Confederation of Employers, Ukrainian Association of Student Self-Government) were identified. At present consultations are held to design profile, level descriptors, credit ranges of the NQF.

- b) The framework includes generic descriptors for each cycle based on learning outcomes and competences.
- c) ECTS credit range for the first and second cycles.
- d) The national qualification framework (NQF) has not been discussed.
- e) Stage of progress on the self-certification of compatibility with the EHEA framework.

Self-certification of compatibility with the EHEA framework has not been started yet.

NATIONAL IMPLEMENTATION OF THE STANDARDS AND GUIDELINES FOR QUALITY ASSURANCE IN THE EHEA (ESG)

9. Reviewing the QA system against the ESG and national support for implementation

- a) Review of the national QA system against the ESG.

The plan for improving and adaptation of the National QA system according to the Standards and Guidelines for QA in the EHEA has been elaborated with regard to:

- internal quality assurance in HEIs;
- external quality assurance in higher education;
- creation of the national quality assurance agency for higher education in compliance with the European Standards and Guidelines for Quality Assurance.

9.1 Internal quality assurance in higher education institutions

The existing QA system includes the following:

- internal assessment (self-analysis of the education institution with further document preparation for licensing or during the accreditation);
- external review (expert assessment of the HEI activity).

The internal QA assessment of the HEI is realised by means of rector tests and the State Examination Boards system. Internal QA structures in HEIs (QA centers, offices, departments) are being created according to the Bologna provisions.

- a) Some of the HEIs have published a strategy for the continuous enhancement of quality.
- b) Some of the HEIs have arrangements in place for the internal approval, monitoring and periodic review of programmes and awards.
- c) Some of the HEIs have described their programmes in terms of learning outcomes
- d) Non of the HEIs applied in a consistent way student assessments designed to measure the achievement of the intended learning outcomes (based on published criteria).
- e) All HEIs publish up to date, impartial and objective information about the programmes and awards offered.



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10. Stage of development of external quality assurance system

a) The stage of implementation of external assurance system.

Different actions on adaptation of the national quality assurance system to the Standards and Guidelines for QA in the EHEA have been held in Ukraine. For the purpose of cooperation and studying the ENQA activity there was created a special department in the State Accreditation Commission. The Ministry of Education and Science of Ukraine has worked out plans and determined terms for the improvement and coordination of the national QA system according to the Standards and Guidelines for QA in the EHEA.

At present, in Ukraine the system of monitoring and ranking of HEIs, which uses international parameters in evaluation, is being formed. At the same time, there is also a national system of monitoring and ranking of HEIs, which was created with the purpose of making managerial decisions.

The National QA system is realized through the licensing and accreditation systems. The corresponding system of publication of accreditation results is in the process of development. In addition, there also operates the State Independent Inspection of Ukraine; there were created Public Accreditation Commissions at regional education boards in all regions; students and public take part in the QA assessment. Thus, on the national level there operates the QA system, which is applied to the whole higher education and includes all elements of higher education QA: external and internal assessment and publication of results. Some of the universities in Ukraine address directly the international accreditation agencies. At present there are more than nine such higher education institutions.

b) External quality assurance system operates at a national level.

c) External quality assurance system covers all higher education.

The following elements are included in external quality assurance system:

- self-assessment;
- external review;
- publication of results;
- follow-up procedures.

d) A peer review of the national agency according to the Standards and Guidelines for QA in the EHEA has not taken place yet.

11. Level of student participation

Aspects of quality assurance in which students are involved:

- in governance of national agencies for QA - yes;
- as full members in external review teams - yes;
- as observers in external review teams - yes;
- as part of the decision making process for external reviews (e.g. arrangements for external reviewers to consult with students) - yes;
- in internal quality assurance (e.g. periodic review programmes) - yes;
- in preparation of self-assessment reports - yes;
- in follow-up procedures - yes.



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12. Level of international participation

There is international participation in quality assurance in:

- the governance of national agencies for quality assurance;
- membership of any other international network.

RECOGNITION OF DEGREES AND STUDY PERIODS

13. Stage of implementation of Diploma Supplement

Recommendations were developed and organizational procedures are carried out to implement the Diploma Supplement, which will be issued to each student graduating in 2008/09 academic year.

a) The Diploma Supplement is not issued to students graduating from:

- 1st cycle programme;
- 2nd cycle programme;
- 3rd cycle programme.

b) A national Diploma Supplement is used which is different from the EU/UNESCO Diploma Supplement format.

13.1 Use of Diploma Supplement for recognition of qualifications

a) The Diploma Supplement is used as the reference document when admitting holders of foreign qualifications to the second and third cycles.

b) Specific actions have not yet been taken at a National and Institutional level to enhance the use of the Diploma Supplement as a communication tool towards the labour market.

14. National implementation of the principles of the Lisbon Recognition Convention

a) Compliance of appropriate legislation with the Lisbon Convention

Current legislation on recognition of foreign qualifications does not contradict to the regulations and principles of the Lisbon Convention. The Lisbon Convention came into force in accordance with the Law of Ukraine "On Ratification of the Convention on Recognition of Higher Education Qualifications in the European Region" in 1999.

b) Compliance of appropriate legislation with the later Supplementary Documents:

i) Recommendation on the Criteria and Procedures for Recognition

Recognition of the Higher Education Qualifications is regulated by the Laws of Ukraine "On Education", "On Higher Education", Cabinet of Ministers of Ukraine decrees No. 1260 "On Education and Scientific Degrees Documents" and No. 1380 "On licensing of education services", Ministry of Education and Science of Ukraine order No. 563 "On approving the Regulations on recognition of the foreign educational documents" that determine the legal and organizational basis of the recognition of the foreign educational documents. These normative documents establish a centralised procedure of recognition, which is in the competence of the Ministry of Education and Science of Ukraine. The National criteria of quality evaluation for foreign qualifications from different parts of the world are based on Provisions of the Lisbon



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Convention. Realisation of these functions in the Ministry is carried out by its department - Licensing, Accreditation and Nostrification Board.

ii) Recommendation of the recognition of Joint Degrees

No

iii) Code of Good Practice in the Provision of Transnational Education

No

c) Applicants have right to fair assessment.

National criteria of quality evaluation for foreign qualifications from different parts of the world are based on Provisions of the Lisbon Convention. Realisation of these functions in the Ministry is carried out by its department - Licensing, Accreditation and Nostrification Board. All of the following principles are applied in practice:

- applicants' right to fair assessment;
- recognition if no substantial differences can be proven;
- demonstration of substantial differences, where recognition is not granted;
- provision of information about the country's HE programmes and institutions.

i) Recognition is granted if no substantial differences can be proven

ii) Recognition is not granted if substantial differences can be proven

d) Actions in order to implement fully the Convention and the later Supplementary Documents.

The Licensing, Accreditation and Nostrification Board establishes the national education informational network that corresponds to ENIC. Ukraine signed 22 intergovernmental international agreements on mutual recognition of educational documents, scientific degrees and academic titles. 32 drafts of such agreements are in the process of adjustment.

15. Stage of implementation of ECTS

a) The percentage of the total number of higher education programmes³⁵ in which all programme components are linked with ECTS credits - 100%.

In academic year 2006/2007 all higher education programmes of the I and II cycles were linked with ECTS credits.

b) In the majority of programmes ECTS credits linked with learning outcomes.

c) Actions in order to improve understanding of learning outcomes.

The following guidelines are prepared for publishing:

- "Professional profiles and Competences";
- "Competences in Education and Cross-Boarder Recognition".

³⁵ Except doctoral studies



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- Professional standards of training specialists with higher education based on competences and learning outcomes are being developed.

d) Actions in order to assist HE staff and other stakeholders in applying ECTS.

The Ministry of Education and Science of Ukraine has prepared guidelines on Implementation ECTS in Ukrainian universities; consultations and discussions of a new draft ECTS User's Guide are being held.

16. Recognition of prior learning

a) There are no nationally established procedures to assess (RPL) as a basis for access to HE programmes.

b) There are no nationally established RPL procedures to allocate credits towards a qualification.

c) There are no nationally established RPL procedures to allocate credits for exemption from some programme requirements.

17. Establishment and recognition of joint degrees

a) Joint degrees are not specifically mentioned in legislation. The legislation fully allows the establishment of joint programmes and awarding of joint degrees.

b) An estimate of the percentage of institutions which are involved in:

- joint degrees - 1-25%;
- joint programmes - 1-25%.

c) The level of joint degree/programme cooperation is little in the first and second cycles and none in the third cycle.

d) Joint degree/programme cooperation most widespread in Information and Communication Technologies, Natural Science, Economics and Business.

e) Higher education institutions that have established joint programmes and are awarding nationally recognised degrees jointly with HEIs of other countries, amount to 3 percent.

MOBILITY

18. Removing obstacles to student and staff mobility

a) Measures that have been taken both at governmental and institutional level to enhance student and staff mobility and overcome main obstacles.

- transfer of students from one higher education institution to another one was simplified thanks to the ECTS credit transfer and accumulation. The bachelor of any university can continue his studies at the second cycle at another university;
- bilateral agreements on student exchange contribute greatly to the international academic mobility.

b) The arrangements for visas, residence and work permits have been amended in order to enhance student and staff mobility.



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c) There is no financial support for national and foreign mobile students and staff.

In Ukraine there are no loans and grants available to students for study abroad. The current legislation of Ukraine does not provide for it. However at present the draft of the President's Decree on granting President's scholarships to the talented students and young researchers for study and probation at the leading foreign universities and research centres has been prepared. The Decree provides for 50 annual scholarships.

d) Study periods taken abroad are recognised.

e) There is accommodation for mobile students and staff.

f) Measures have been taken to increase outward student and staff mobility.

For the increase of outward student and staff mobility contribute:

- probation of the Ukrainian university teachers at the leading European universities;
- inter-university bilateral agreements on staff and student exchange;
- creation of joint programmes of training specialists with leading European universities;
- carrying out joint research programmes with leading universities from the countries participating in the Bologna Process.

THE ATTRACTIVENESS OF THE EHEA AND COOPERATION WITH OTHER PARTS OF THE WORLD

19. Implementation of strategy

a) Measures that have been taken in order to implement the strategy "European Higher Education in a Global Setting".

Measures to implement the strategy 'European Higher Education in a Global Setting' are envisaged by the Action Plan 'On quality assurance for higher education of Ukraine and its integration into the European and world educational community for the period until 2010'.

Ukraine modernizes its system of higher education in line with the Bologna provisions, standards and guidelines. Professional programmes of study of the leading universities of Europe and other regions are being implemented by the Ukrainian universities.

b) Strengthening of cooperation based on partnership in higher education.

Ukraine concluded agreements on partnership in higher education with 52 countries from and outside Europe. Work has started to develop a national qualifications framework compatible with the EHEA qualifications framework and qualifications framework of other parts of the world.

c) Measures that have been taken in order to implement the OECD/UNESCO Guidelines for Quality Provision in Cross-border Higher Education.

The normative-legal provisions to implement OECD/UNESCO Guidelines for Quality Provision in Cross-border Higher Education are being elaborated.



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FUTURE CHALLENGES

20. Main challenges for higher education

- development of a national qualifications framework compatible with the EHEA qualifications framework;
- introduction of the innovative institutional structure, three-cycle system, new fields of study and training specialists with higher education, that are compatible with the EHEA;
- development of the university study programmes according to the Bologna provisions;
- introduction of joint degrees and courses (programmes) for foreign students;
- development of the national qualifications framework for lifelong learning;
- creation of the up to date mechanisms of recognition of prior learning (formal, informal, non-formal);
- implementation of the Diploma Supplement of the EU/CoE/UNESCO format;
- creation of the national quality assurance agency for higher education in compliance with the European Standards and Guidelines for Quality Assurance, its full ENQA membership and inclusion to the EQAR;
- creation of the agency for academic recognition and international exchange as the national ENIC/NARIC centre;
- introduction of a system of ranking of higher education institutions that would comply with Berlin principles of ranking of HEIs;
- increase in outward and inward mobility of students and academic and administrative staff of higher education institutions;
- assuring portability of student grants and loans;
- provision of equal access to higher education;
- preparing of research and educational staff, improvement of their competencies according to modern requirements with a view to ensure sustainable development of the country and its system of higher education;
- development and introduction of new educational standards (curriculum reform) with a view to the improvement of quality of the content of vocational/professional education and training and its adjustment to the needs of employers;
- development of the up to date mechanisms of taking into account labour market demands by higher education institutions to facilitate employability of graduates;
- promotion of the development of Ukrainian and World cultural values, orientation towards the ideals of democracy and humanism essential for the existence and development of a civil society.

Source: Bologna Process, National Reports: 2007-2009, 01 November, 2008;