



ASIIN Accreditation Report

Bachelor's and Master's Degree Programmes

Chemistry

Chemistry (educational)

Biology

Biology (educational)

Provided by

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A About the Accreditation Process

Title of the degree Programme	Labels applied for ¹	Previous accreditation	Involved Technical Committees (TC) ²
B.Sc. Chemistry	ASIIN, Eurobachelor® Label	none	09
B.Sc. Chemistry in the field of education	ASIIN, Eurobachelor® Label	none	09
M.Sc. Chemistry	ASIIN, Euro-master® Label	none	09
M.Sc. Chemistry (scientific-pedagogical)	ASIIN, Euro-master® Label	none	09
B.Sc. Biology	ASIIN	none	10
B.Sc. Biology in the field of education	ASIIN	none	10
M.Sc. Biology	ASIIN	none	10
M.Sc. Biology (scientific-pedagogical)	ASIIN	none	10
<p>Date of the contract: 09.07.2013</p> <p>Submission of the final version of the self-assessment report: 06.01.2014</p> <p>Date of the onsite visit: 19./20.11.2014</p> <p>at: Ust-Kamenogorsk</p>			

¹ ASIIN Seal for degree programmes; Eurobachelor®/Euromaster® Label: European Chemistry Label

² TC: Technical Committee for the following subject areas: TC 01 – Mechanical Engineering/Process Engineering; TC 02 – Electrical Engineering/Information Technology); TC 03 – Civil Engineering, Surveying and Architecture; TC 04 – Informatics/Computer Science); TC 05 – Physical Technologies, Materials and Processes); TC 06 – Industrial Engineering; TC 07 – Business Informatics/Information Systems; TC 08 – Agronomy, Nutritional Sciences and Landscape Architecture; TC 09 – Chemistry; TC 10 – Life Sciences; TC 11 – Geosciences; TC 12 – Mathematics; TC 13 – Physics.

<p>Peer panel:</p> <p>Prof. Dr. Hans-Jürgen Duchstein, Hamburg University;</p> <p>Prof. Dr. Gabriele Hornung, Kaiserslautern University;</p> <p>Dr. Gerhard Lapke, Deutsche BP AG;</p> <p>StDin Monika Pohlmann, Köln University;</p> <p>Prof. Dr. Andreas Seubert, Marburg University;</p> <p>Yekaterina Astafyeva, student from Shymkent University</p>
<p>Representative of the ASIIN headquarter:</p> <p>Dr. Georg Ebertshäuser</p>
<p>Responsible decision-making committee: Akkreditierungskommission für Studiengänge</p>
<p>Criteria used:</p> <p>European Standards and Guidelines as of 10.05.2005</p> <p>ASIIN General Criteria, as of 28.06.2012</p> <p>Subject-Specific Criteria of Technical Committee 09 – Chemistry as of 09.12.2011</p> <p>Subject-Specific Criteria of Technical Committee 10 – Life Sciences as of 09.12.2011</p>

In order to facilitate the legibility of this document, only masculine noun forms will be used hereinafter. Any gender-specific terms used in this document apply to both women and men.

B Characteristics of the Degree Programmes

a) Name & Final Degree	b) Areas of Specialization	c) Mode of Study	d) Duration & Credit Points	e) First time of offer & Intake rhythm	f) Number of students per intake	g) Fees
Chemistry, B.Sc.	n.a.	Full time / part time	8 Semester 207 CP	WS 2004 / WS	300 / term (maximum possible)	343000 KZT / year
Chemistry in the field of education, B.Sc.	n.a.	Full time / part time	8 Semester 207 CP	WS 2004 / WS	300 / term (maximum possible)	434000 KZT / year
Chemistry, M.Sc.	n.a.	Full time / part time	4 Semester 79 CP	WS 1998 / WS	100 / term (maximum possible)	396000 KZT / year
Chemistry (scientific-pedagogical), M.Sc.	n.a.	Full time / part time	4 Semester 79 CP	WS 1998 / WS	100 / term (maximum possible)	396000 KZT / year
Biology, B.Sc.	n.a.	Full time / part time	8 Semester 207 CP	WS 2004 / WS	300 / term (maximum possible)	343000 KZT / year
Biology in the field of education, B.Sc.	n.a.	Full time / part time	8 Semester 207 CP	WS 2004 / WS	300 / term (maximum possible)	434000 KZT / year
Biology, M.Sc.	n.a.	Full time / part time	4 Semester 79 CP	WS 1998 / WS	100 / term (maximum possible)	396000 KZT / year
Biology (scientific-pedagogical), M.Sc.	n.a.	Full time / part time	4 Semester 79 CP	WS 1998 / WS	100 / term (maximum possible)	396000 KZT / year

For the degree programme Ba Chemistry, the self-assessment report states the following **intended learning outcomes**:

Table 1-objectives of educational programs 5B060600-Chemistry, 5B011200-Chemistry

Purpose code	Purpose statement
Purpose #1	Providing conditions for acquisition of a high general intellectual level of development; mastering the competent and developed speech, humanitarian culture and thinking; skills of scientific labor organization; knowing Law basics; full development of personality.
Purpose #2	Transfer and assimilation of knowledge, skills, formation of informative interests and abilities, special training for professional activities.
Purpose #3	Transfer of national culture on the following generations.
Purpose #4	Education of ideological conviction, civic consciousness.
Purpose #5	Developing political activity, patriotism and internationalism; tolerance to representatives of other beliefs; aspiration to knowledge and culture; transition from the principle "education for the rest of life" to the principle "education during all life".
Purpose #6	Defining strategic priorities of education for forming national model of continuous education, integrated into the world's educational space, meeting the needs of the person and society.
Purpose #7	Theoretical and practical assimilation of bases of inorganic, analytical, organic, physical chemistry; chemical technology; physical and chemical methods of research; quantum mechanics and computer chemistry that creates conditions for the development of creative potential, initiative and innovation; students' getting further education at the subsequent level of higher professional education.
Purpose #8	Receiving profound knowledge in the field of one and narrower direction in Chemistry; mastering modern methods of scientific research; students' choosing individual programs in the field of one education and professional competence, that would provide competitiveness of graduates in the labor market; opportunities for fast employment in the specialty.

The following **curriculum** is presented:

A curricular overview of the degree programme was missing from the documentation.

For the degree programme Ba Chemistry in the field of education, the self-assessment report states the following **intended learning outcomes**:

Table 1-objectives of educational programs 5B060600-Chemistry, 5B011200-Chemistry

Purpose code	Purpose statement
Purpose #1	Providing conditions for acquisition of a high general intellectual level of development; mastering the competent and developed speech, humanitarian culture and thinking; skills of scientific labor organization; knowing Law basics; full development of personality.
Purpose #2	Transfer and assimilation of knowledge, skills, formation of informative interests and abilities, special training for professional activities.
Purpose #3	Transfer of national culture on the following generations.
Purpose #4	Education of ideological conviction, civic consciousness.
Purpose #5	Developing political activity, patriotism and internationalism; tolerance to representatives of other beliefs; aspiration to knowledge and culture; transition from the principle "education for the rest of life" to the principle "education during all life".
Purpose #6	Defining strategic priorities of education for forming national model of continuous education, integrated into the world's educational space, meeting the needs of the person and society.
Purpose #7	Theoretical and practical assimilation of bases of inorganic, analytical, organic, physical chemistry; chemical technology; physical and chemical methods of research; quantum mechanics and computer chemistry that creates conditions for the development of creative potential, initiative and innovation; students' getting further education at the subsequent level of higher professional education.
Purpose #8	Receiving profound knowledge in the field of one and narrower direction in Chemistry; mastering modern methods of scientific research; students' choosing individual programs in the field of one education and professional competence, that would provide competitiveness of graduates in the labor market; opportunities for fast employment in the specialty.

The following **curriculum** is presented:

5B011200-CHEMISTRY

List of modules		Disciplines of the module	RK - credits / ECTS - the credits						
№	Module		MNT	SS	ASS	ISC		Total	
1	Communicative 1	Kazakh (Russian) language				6	10	6	10
2	Worldview	Philosophy				3	5	3	5
3	Social-political	Sociology				2	3	4	6
		Political science				2	3		
4	Business and Law	Law basics				2	3	4	6
		Basics of economic theory				2	3		
5	National History	History of Kazakhstan				3	5	3	5
6	Information and communication	Computer science				3	5	3	5
7	Protection of the environment and human health	Environment and Sustainable Development	2	3				4	6
		Basics of life safety	2	3					
8	Communicative 2	Foreign language				6	10	6	10
9	Physical and mathematical	Higher mathematics	2	3				4	6
		Physics	2	3					
10	Psychological	Psychology and human development	3	5				7	11
		Age psychology and school hygiene	2	3					
		Self-study	2	3					
11	Professional and communicative	Professional Kazakh (Russian) language			2	3		4	6
		Professionally focused foreign language			2	3			
12	Pedagogical -1	Introduction to pedagogical profession		1	2			4	7
		Pedagogics		3	5				

13	Pedagogical - 2	Theory and methods of educational work			2	3								
		Ethnopedagogics					2	3					4	6
14	Inorganic chemistry 1	Theoretical basics of inorganic chemistry			4	6							4	6
15	Inorganic chemistry 2	Chemistry of elements of periodic system			4	6							6	9
		Substance structure			2	3								
16	Analytical chemistry-1	Qualitative analysis			3	5							3	5
17	Analytical chemistry-2	Quantitative analysis			3	5							3	5
18	Organic chemistry-1	Organic chemistry of aliphatic compounds			3	5							3	5
19	Organic chemistry-2	Organic chemistry of cyclic compounds			3	5							3	5
20	Basics of chemical technology	Chemical technology			3	5							3	5
21	Methods of teaching chemistry - 1	Methods of teaching chemistry			3	5								
		Methods of solving tasks in Chemistry					2	3					5	8
22	Methods of teaching chemistry - 2	Methods of search and selection scientific and technical information	1	2										
		Methods of carrying out school chemical experiment					3	5					4	7
23	Chromatography	Chromatographic and hybrid methods of analysis			3	5							3	5

25	Physical, colloidal chemistry and sampling	Sampling and preparation of substances for analysis	2	3																							
		Physical chemistry			2	3																					
		Colloidal chemistry			2	3															6	9					
26	Chemical ecology	Chemical ecology	3	5																	3	5					
27	Analytical chemistry - 3	Methods of masking, division and concentration in analytical chemistry																					3	5			
28	Phase analysis	Analysis of raw mineral materials																					3	5			
28	Modern technical methods of data processing of chemical and educational process	Information and communication technologies in chemical and educational process																						4	6		
		Statistical methods of analysis in chemical and educational process	2	3																							
29	Physical, physical and chemical methods of analysis	Electrochemical methods of analysis																							5	8	
		Spectroscopy of an ultraviolet and visible range																									
30	Basics of spectroscopy, infrared and radio frequency ranges and chemical synthesis	Chemical synthesis																								4	6
		Magnetic resonance and IR-spectroscopy																									
31	Mineral fertilizers	Expertise of mineral fertilizers																								3	5

32	Innovative	Features of management organization of pedagogical process in school with small grades																									5	8	
		Modern educational technologies																											
total																												50	208
percentage																												24,0	100

For the degree programme Ma Chemistry, the self-assessment report states the following intended learning outcomes:

Table 2- objectives of educational programs 6M060600 – Chemistry, 6M011200 - Chemistry

Purpose code	Purpose statement
Purpose #1	Receiving fundamental, quality, professional education, profound specialized knowledge in the chosen area of chemistry which will allow to develop science successfully
Purpose #2	Mastering all types and skills of theoretical and experimental chemistry studies
Purpose #3	Mastering methods of theoretical chemical models and main techniques of their mathematical formalization and solving. Mastering techniques and methods of computer modeling of chemical processes
Purpose #4	Education of highly qualified specialists capable to independently acquire new knowledge, to adapt to changing social and economic conditions at internal and external labor markets
Purpose #5	Mastering high level of professional culture, promoting ability to form and

	solve modern scientific and practical chemical problems, to train in chemistry in higher educational institutions, to successfully carry out organizational and administrative activities
Purpose #6	Assimilation by undergraduates of fundamental knowledge of joint sciences, providing their professional mobility at a labor market
Purpose #7	Training for scientific and creative work, critical judgment of results, responsibility for their professional activity in conditions of free, democratic and constitutional state
Purpose #8	Getting the possibility for further education for Doctor's degree.

The following **curriculum** is presented:

The curriculum for the degree programme was missing from the documentation.

For the degree programme Ma Chemistry (scientific-pedagogical), the self-assessment report states the following **intended learning outcomes**:

Table 2- objectives of educational programs 6M060600 – Chemistry, 6M011200 - Chemistry

Purpose code	Purpose statement
Purpose #1	Receiving fundamental, quality, professional education, profound specialized knowledge in the chosen area of chemistry which will allow to develop science successfully
Purpose #2	Mastering all types and skills of theoretical and experimental chemistry studies
Purpose #3	Mastering methods of theoretical chemical models and main techniques of their mathematical formalization and solving. Mastering techniques and methods of computer modeling of chemical processes
Purpose #4	Education of highly qualified specialists capable to independently acquire new knowledge, to adapt to changing social and economic conditions at internal and external labor markets
Purpose #5	Mastering high level of professional culture, promoting ability to form and

	solve modern scientific and practical chemical problems, to train in chemistry in higher educational institutions, to successfully carry out organizational and administrative activities
Purpose #6	Assimilation by undergraduates of fundamental knowledge of joint sciences, providing their professional mobility at a labor market
Purpose #7	Training for scientific and creative work, critical judgment of results, responsibility for their professional activity in conditions of free, democratic and constitutional state
Purpose #8	Getting the possibility for further education for Doctor's degree.

The following **curriculum** is presented:

The curriculum was missing from the documentation.

For the degree programme Ba Biology, the self-assessment report states the following **intended learning outcomes**:

The main goal of national education for speciality 5B060700-Biology is to provide the conditions for getting complete, professional education of high quality, professional competence in different areas of biology.

The purpose of teaching general academic disciplines is to provide the conditions for obtaining a high intellectual level, eloquence, humanitarian thinking culture, and skills of scientific labor organization;

The purpose of teaching basic academic disciplines is to create conditions for the development of creativity, initiative and skills for innovation, for getting further higher professional education by students. The choice of basic disciplines - is to provide the basis for forming knowledge in biology.

The purpose of studying main academic subjects is the formation of the competitiveness among graduates in the labor market for possible quick getting a professional job; students' choice of individual programs in the field of education.

The following **curriculum** is presented:

Curriculum content		5B060700-Biology					
Condition:							
№	List of Modules	ECTS-кредиты				Exam type	
		MNT	SS	ASS	ISC	Total	
1	Communicative 1				10	10	oral
2	Communicative 2				10	10	oral
3	Worldview				5	5	testing
4	The socio-political				6	6	testing
5	Business and Law				6	6	testing
6	Motherland History				5	5	testing
7	Information and communication	5				5	testing
8	Protection of the environment and human health	6				6	testing
9	Professional languages			9		9	oral
10	Physico-Mathematical	10				10	testing
11	Chemical		5			5	testing
12	Zoological	5				5	testing
13	Methodology of teaching		5			5	testing
14	Life origin and bioresources		6			6	writing
15	Biochemical	5				5	testing
16	Physiology of development	5				5	testing
17	Botanical	7				7	testing
18	Statistical biology		5			5	testing
19	Cytological	5				5	testing
20	Bioecological			9		9	testing
21	Genetical	5				5	testing
22	Soil biology		5			5	testing
23	Biotechnological		8			8	testing
24	Biological1		11			11	testing
25	Faunal			9		9	testing
26	Environmental Biotechnology		5			5	testing
27	Applied zoology		8			8	testing
28	Biological		11			11	testing
29	Methodical			5		5	testing
30	Ornithological			5		5	testing
31	Spiritual and moral				6	6	testing
Total		53	69	37	48	207	
Percentage		25,6	33,3	17,9	23,2	100	

For the degree programme Ba Biology in the field of education, the self-assessment report states the following **intended learning outcomes**:

The main goal of national education for speciality 5B011300 - Biology is to train high-level professionals in the field of new biological and environmental technologies, to provide the competitiveness of students in the world educational space in the era of technocracy and globalization.

The knowledge of a foreign language and high quality of education guarantees: the mobility of students and teaching staff of higher educational institutions, the convertibility of documents of higher education for the equal participation of the Republic of Kazakhstan in educational space.

The following **curriculum** is presented:

Curriculum content		5B011300-Biology					Exam type
Condition:							
List of Modules		ECTS credits					Exam type
Nº	Module	MNT	SS	ASS	ISC	Total	
1	Communicative 1				10	10	oral
2	Communicative 2				10	10	oral
3	Worldview				5	5	testing
4	The socio-political				6	6	testing
5	Business and Law				6	6	testing
6	Domestic History				5	5	testing
7	Information and communication	5				5	testing
8	Protection of the environment and human health	6				6	testing
9	Professional languages			9		9	oral
10	Physiological		8			8	testing
11	Methodology of teaching		8			8	testing
12	Pedagogical-2		8			8	testing
13	Introductory		10			10	testing
14	Biotechnological		5			5	testing
15	Anatomical and biophysical		8			8	writing
16	Zoological	5				5	testing
17	Animal life	5				5	writing
18	Cytology, histology and systematics	8				8	testing
19	Living processes in plants and microorganisms	8				8	writing
20	Applied biology		6			6	writing
21	Evolutionary and biophysical		6			6	writing
22	Physiological 1	5				5	testing
23	Anatomy and morphology	5				5	testing
24	Biochemical 1			5		5	testing
25	Chemical 1			5		5	testing
26	Chemical 2			5		5	testing
27	Floristic	8				8	testing
28	Statistical biology		5			5	testing
29	Ecological			5		5	testing
30	Innovation methods			5		5	testing
31	Methodology of teaching			6		6	testing
32	Innovational	6				6	testing
Total		55	64	40	42	201	
Percentage		27,4	31,8	19,9	20,9	100	

For the degree programme Ma Biology, the self-assessment report states the following **intended learning outcomes**:

A graduate of core Master's programme must have fundamental scientific and practical training, have the command of modern information technologies, have skills for conducting research work and experiments, be able to solve practical questions of organization, functioning and modernization of production and business of corresponding profile, etc.

A graduate of scientific-pedagogical MA course must have fundamental scientific and pedagogical training, have the command of modern information technologies, including methods of getting, processing and keeping scientific information, be able to put forward and solve modern scientific, educational and methodical problems, plan and conduct the research work on the selected branch of science, teach at the institutions of higher education and special educational institutions of corresponding profile, work as a manager.

The following **curriculum** is presented:

List of modules		ECTS-credits					Exam type
№	Module	MNT	SS	ASS	ISC	Total	
1	Polylingual		10			10	oral
2	General scientific				15	15	oral
3	Biological compulsory	15				15	oral
4	Technologies of biology teaching		16			16	oral
5	Ecological and phytocoenotic			5		5	oral
6	Special botanic			5		5	oral
7	Anatomical and morphological			5		5	oral
8	Informational and communicative	8				8	oral
Total		23	26	15	15	79	
Percentage		29,1	32,9	19,0	19,0	100	

For the degree programme Ma Biology (scientific-pedagogical), the self-assessment report states the following **intended learning outcomes**:

Persons who mastered the educational programs of MA course and defended Master's degree dissertation are conferred with the academic degree of "Master of Biology" in speciality 6M011300 - Biology.

The points of this Standard have the following goals:

- increasing of work efficiency of higher educational institutions and research organizations, training Master's Degree students;
- stimulation of individual academic, research and pedagogical activity of Master's Degree students;
- guaranteeing acknowledgement of documents of the Republic of Kazakhstan about conferment of academic Master's Degree in international educational space and in international labour market.

A graduate of MA course must have fundamental scientific and professional training, have a command of modern information technologies, including methods of getting, processing and keeping scientific information, be able to formulate and solve modern scientific and practical problems, plan and conduct scientific research activity in selected scientific speciality, teach at the institutions of higher education, carry out successful research and administrative work.

The following **curriculum** is presented:

Lit of module		ECTS-credits					Exam type
№	Module	MNT	SS	ASS	ISC	Total	
1	Polylingual		10			10	oral
2	General scientific				15	15	oral
3	Technologies of biology teaching		16			16	oral
4	Biological compulsory	15				15	oral
5	Selection			5		5	oral
6	Environment protection		5			5	oral
7	Ecological			5		5	oral
8	Informational and communicative	8				8	oral
Total		23	31	10	15	79	
Percentage		29,1	39,2	12,7	19,0	100	

C Peer Report for the ASIIN Seal³

1. Formal Specifications

Criterion 1 Formal Specifications
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Evidence:

- Self Assessment Report

Preliminary assessment and analysis of the peers:

The peers asked about apparent differences in the names of the degree programmes throughout the report. They were informed that variations in the nomenclature of the degree programmes were not intended and will be corrected and standardized accordingly. The peers were content with this information.

Since the documentation states only the numbers of graduates from the degree programmes in recent years, the peer panel liked to confirm the actual number of intake for each programme. The programme representatives told the auditors that theoretically an annually intake of 500 students for the Bachelor's degree programmes and of 100 students for the Master's degree programmes is possible. However, actual numbers are significantly lower: 80 beginners in the Biology degree programmes, and 30 beginners in the Chemistry degree programmes. The proportion of students in the educational branches is still higher than in the scientific branches due to the tradition of the HEI as an institution of pedagogical training. But a rising demand for graduates in the industry leads to an increase in the number of students in the scientific branches.

The auditors learned that approximately 15 grants are available per year for the Biology programmes, and 12 grants for the Chemistry programmes. Some additional grants are sponsored by the city government or the local industry.

The programme coordinators explained to the peers that the degree programmes are possible to be studied in part time mode. In part time studies the theoretical part of the degree programmes is conducted as self study and e-learning, the practical work is still held at the HEI, but takes places during the evenings.

³ This part of the report applies also for the assessment for the European subject-specific labels. After the conclusion of the procedure, the stated requirements and/or recommendations and the deadlines are equally valid for the ASIIN seal as well as for the sought subject-specific label.

With the above explanations taken into account, the auditors found the information given concerning name of the programmes, type of the programme (full or part time), final degree, length of studies, number of credit points gained, start date of the programme in the academic year, expected intake of the programmes, as well as amount of fees to be sufficient.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 1:

The peers confirmed their original view and judged the criterion as fulfilled.

2. Degree programme: Concept & Implementation

Criterion 2.1 Objectives of the degree programme

Evidence:

- Self Assessment Report

Preliminary assessment and analysis of the peers:

The peers asked the programme coordinators to explain the differences between the educational and scientific branches in the Chemistry and Biology programmes. They were informed that the HEI is responsible for the training of teachers in the region. In recent times, the pedagogical education of teachers in Chemistry and Biology are very strongly developed. Therefore a new emphasis is laid upon the training of research and scientific personnel for the industry and the regional research centers which cooperate closely with the HEI. With the developing need for scientific researchers, the HEI increases the number of students in this branch of the programmes.

The programme coordinators stated towards the peer panel that the scientific and educational branches of the degree programmes are separate from the beginning, there are now common, or shared modules.

The auditors came to the conclusion that the aims of the degree programmes under review – although being relatively generic and stressing the general contents of the programmes instead of the subject specific – still can be considered sufficient to classify the final degrees in academic and professional terms. The peers noted that the aims for the Bachelor's degree programme Chemistry were missing from the documentation and have to be provided for the final assessment by the peers. They made also clear that the aims of the degree programme have to be made available to the public so that all relevant

stakeholders may rely on them. The auditors therefore ask the HEI to provide a publicized version of the aims for the final assessment.

Criterion 2.2 Learning Outcomes of the Programme

Evidence:

- Self Assessment Report
- Discussions with representatives of the university

Preliminary assessment and analysis of the peers:

In general the peers judged that the HEI has specified the intended learning outcomes as a whole. In the view of the peers the intended learning outcomes are accessible to the relevant stakeholders, reflect the level of the qualification sought; are achievable, valid, and reflect currently foreseeable developments in the subject area. The auditors found that the names of the programmes reflect the intended learning outcomes of the programmes.

In particular, the peer panel deemed the intended learning outcomes of the programmes comparable to the exemplary learning outcomes of the appropriate ASIIN Subject Specific Criteria of the Technical Committees 09 Chemistry, and 10 Life Sciences respectively.

For example, graduates of the Bachelor's degree programmes Chemistry "possess basic knowledge in the field of natural science disciplines", "show knowledge and understanding in the studied area, including elements of the latest developments", and can "apply this knowledge and understanding at an professional level". This corresponds to the basic ASIIN criteria that graduates should have gained "fundamental knowledge of mathematics and natural sciences", "have sound knowledge of core subjects of chemistry", and "are able to carry out practical chemistry work. These intended learning outcomes do also match the criteria for first cycle degree programmes for the award of the Eurobachelor®-Label.

In case of the Master's degree programmes Chemistry, the graduates have "to show developing knowledge and understanding", "to apply knowledge, understanding and ability to solve a problem in new or unfamiliar situations", and "have to integrate knowledge, cope with difficulties and bear judgments on the basis of incomplete or limited information". This is corresponding to the ASIIN criteria that graduates "have deepened their knowledge in core subjects", "apply their knowledge and understanding in order to solve problems in new and unaccustomed situations", and "have knowledge [...] which forms the basis for original and competent development and implementation of ideas". These

intended learning outcomes do also comply with the criteria for the award of the Euromaster®-Label for second cycle degree programmes.

Graduates of the Bachelor's degree programmes Biology have to know “the main conceptions, methods and perspectives of biology development; the basic taxons of plant and animal life, mushrooms and microorganisms; peculiar features of morphology, physiology and reproduction; geographical distribution and ecology of the representatives of the basic taxons; the principles of system organization, differentiation and integration of the functions of organisms”. This equates to the ASIIN criteria that graduates should “have sound knowledge of the fundamentals of molecular, cell and organismic biology”. The learning outcome of the degree programmes in question stipulate that a graduate “has skills to conduct research, to collect and prepare scientific materials, to process the results of the field and experimental research, to teach in the secondary and professional schools, to organize and realize extracurricular forms of work with schoolchildren, to inform in the sphere of biology and ecology”, which roughly corresponds to the ASIIN criteria that graduates “are able to carry out practical work in labs and outdoors independently as well as handle organisms”.

For the Master's degree programmes Biology the graduates for example “know conceptual systems of biology and laws of their development, philosophical questions of fundamental laws and theories in biology, basic laws and principles, determining the basics of theoretical biology, biotechnology, ecology and other biological sciences”. This finds its counterpart in the ASIIN criterion that graduates “have gained subject-specific and interdisciplinary problem solving competence”.

According to the opinion of the peers the social competences described in the Subject Specific Criteria of the ASIIN Technical Committees 09 – Chemistry and 10 – Life Sciences can be found in the intended learning outcomes of the degree programmes under review as well. The peers noted that social competences and individual skills are strongly developed in the programmes' intended learning outcomes and form a vital part of them.

In the opinion of the peers, the intended learning outcomes of the pedagogical branches of the degree programmes are with respect to their pedagogical contents and aims well adapted for the education of teachers and fulfill the respective requirements.

Criterion 2.3 Learning outcomes of the modules/module objectives

Evidence:

- cf. module descriptions
- Discussions with representatives of the university

Preliminary assessment and analysis of the peers:

The peers noted that the modules descriptions for the Master's degree programme Chemistry, the Bachelor's degree programme Biology, and the Master's degree programme Biology (all scientific branch) were missing from the documentation provided by the HEI. They asked the HEI to supply these modules description before a final assessment of the respective degree programmes by the peers can be made. Module descriptions for the graduations theses (both Bachelor's and Master's theses) are lacking from the available modules handbook and have to be provided with the additional documents.

With view to the modules descriptions of the other degree programmes under review, the peers found them to match the respective ASIIN criteria in most aspects. The module descriptions are available to relevant stakeholders, and make it clear what knowledge, abilities and competences are expected from the students to acquire in the individual modules. However, the peers judged that some important information is still missing: the type and duration of examinations is not stated in the module handbook; the credit points are not always stated correctly and have to be checked and revised; the elective modules and practical work is not clearly marked and described and has to be incorporated in the modules descriptions; the graduation thesis has to be incorporated in the modules descriptions. The peers also noted that in the Bachelor's degree programme Chemistry some modules have very similar names and descriptions. The peers suggested to elaborate the differences in these modules more clearly or likewise to unite the contents to one module.

The peers judged that the intended learning outcomes for the programmes as a whole are systematically put into practice within the individual modules. The HEI has provided a matrix which aligns the intended learning outcomes with the individual modules. The auditors deemed that all relevant intended learning outcomes of the degree programmes are reflected in the individual modules. The Subject Specific Criteria of the Technical Committees 09 – Chemistry and 10 – Life Sciences of ASIIN are reflected in the modules, too.

Criterion 2.4 Job market perspectives and practical relevance
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Evidence:

- Discussions with programme coordinators and students
- Self Assessment Report
- Description of expected learning outcomes

Preliminary assessment and analysis of the peers:

The peers were informed by the programme coordinators that the HEI organizes conferences together with employers where talks about the industry's demands are held. There is also a yearly employment fair at the HEI where the demands of the various industrial branches can be determined and students and graduates can make contacts for first engagements. Because of the abundance of raw materials in Kazakhstan, the need for specialists in chemistry is very high. In the field of biology, job perspectives lie mainly in agriculture or the great natural reservations. According to the programme coordinators the job market perspectives for graduates of both branches, chemistry and biology, are very good. The students confirmed this view. For graduates of the educational degree programmes job perspectives are mainly in the regional school system. The peers saw that there is a demand on the labour market for graduates who possess the intended learning outcomes; the competences presented allow graduates to work in a sphere appropriate to their qualification.

The peers visited Kazzinc, a major cooperation partner of the degree programmes Biology and Chemistry in the industry, where students are able to do their practical and laboratory work. The peers convinced themselves that the component of practical learning is sufficiently established in the degree programmes. The peers noted approvingly the small group sizes in practical courses, which were also confirmed by the students as a major asset of the degree programmes.

Criterion 2.5 Admissions and entry requirements

Evidence:

- Self Assessment Report
- Discussions with representatives of the rectorate, the programme coordinators, and the teaching staff

Preliminary assessment and analysis of the peers:

The HEI provided a description of the admission requirements and procedure for the degree programmes. The peers deemed the admission provisions to be sufficient in the view of the respective criterion. The admission procedure is mostly governed by regulations issued from the Ministry of Education and conducted through a nationwide entry exam. If a student attains a minimum of 50 out of 100 points, he is enrolled in the Bachelor's degree programme. If the test result of an individual applicant is significantly higher than 50 points he may receive a state sponsored grant. All results of the nationwide university entry examination are published in a leading national newspaper. The rules applied are open to the public and transparent. Admission is also possible for applicants with educational backgrounds diverging from an established standard (secondary school diploma),

such as applicants with professional backgrounds, with education in different mother tongues, with foreign school or Bachelor's diplomas etc.

The peer panel was informed that admission to the Master's degree programmes is governed by a foreign language test in English or German language and by a subject specific test. Everybody who passes the test (roughly 50% of the applicants according to the HEI) is entitled to start a Master's degree programme. According to the test results of the individual students, the Ministry of Education distributes grants. The allocation of resources for the degree programmes depends on the number of students admitted, so that a rise in the number of admitted students leads automatically to an increase in the resources available to the degree programme.

Criterion 2.6 Curriculum/Content

Evidence:

- Curriculum
- Self Assessment Report

Preliminary assessment and analysis of the peers:

The peers came to the conclusion that the curricula in place and presented by the HEI make it possible to achieve the intended learning outcomes and that objectives and contents of the individual modules are coordinated in order to avoid overlaps.

However, the peers noted that the curricular overviews for the degree programmes were split in three different tables in the documentation, all with different information and aspects of the degree programmes, which made the reading and comprehension extremely difficult. Moreover, some details of the tabular overviews of the degree programmes seem to contradict each other, or provide incorrect information. The tables also missed an explanation of the shortcuts used. The auditors therefore asked the HEI to provide one tabular curricular overview for each degree programme that combines and integrates the information of the three existing tables, and in this process to check, and – if necessary – correct and amend the information given in the tables. This new reworked curricular overviews have to be presented together with the comments of the HEI in order to make a final assessment by the audit team possible.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2:

The peers noted that the HEI provided a set of aims for the Bachelor's degree programme Chemistry and judged these to be sufficient. The auditors took also into consideration that the HEI provided a new list with the aims of all degree programmes under review.

However, the peers had asked in their original statement for a *publicized* version of aims the degree programmes. The newly provided list does not indicate whether these aims are publicly available to all relevant stakeholders in a form that they may rely on it. The peers therefore pointed out that the HEI has to submit a proof that the aims for all degree programmes are duly publicized.

The peers considered the module descriptions now to be complete; descriptions for all degree programmes were available to the auditors. The peers found that the graduation theses obviously have been incorporated into the modules descriptions. The practical and laboratory work as well as the elective modules are now clearly defined in the module descriptions. However problems in the module handbook remain to be solved: the type (oral, presentation, and written ect.) and duration of examinations is still not stated in the module handbook; the credit points still show differences between the modules descriptions, the curricular overviews and the newly provided list of mandatory and elective modules. These still have to be checked and revised. Furthermore, the modules descriptions still contain many inconsistencies and mistakes. The terminology used is not clearly defined (e.g. sometimes the term “results of education” is used, sometimes “teaching results”); for the some modules the description of the learning outcomes is exactly the same as the contents of the module; in general the description of the modules contents seems to be more elaborate than the more generic description of the learning outcomes. The peers asked the HEI to thoroughly check and revise the whole modules descriptions. The peers found the fore mentioned list of elective and mandatory modules for all degree programmes helpful for understanding the structure and composition of the programmes under review. The auditors thought these lists to be of use for the relevant stakeholders, too, and suggested to incorporate the list (after correction of the credit points!) in the official documentation of the degree programmes. Otherwise the peer panel judged the criterion to be fulfilled.

3. Degree Programme: Structures, Methods & Implementation

Criterion 3.1 Structure and modularity

Evidence:

- Curricula of the programmes
- Module descriptions

Preliminary assessment and analysis of the peers:

The peers found that the programmes are modular, and that each module is a coherent and consistent learning package.

The peers judged that the size and duration of the modules allow students to combine them flexibly and to facilitate the transfer of credits. Studies abroad are possible within the degree programmes and credits earned at a foreign HEI can be transferred according to the regulations.

The peers saw that the Master's degree programme does not incorporate any modules at undergraduate level. They perceived that individual students may not be awarded credits for the same module at Bachelor's and again at Master's level.

The peers missed the Bachelor's and Master's thesis from the curricular overviews and the modules descriptions. They asked whether a graduation thesis was required in the degree programmes under review, and how it is conducted. The programme coordinators explained that the thesis work is distributed over a lengthier period of time and therefore not described as a separate module. In the Bachelor's degree programmes the students chose their graduation project during the third semester and constantly work upon this project up to the conclusion of the written thesis and their oral defense in the eighth semester. In the Master's degree programmes the thesis project is chosen in the first semester and concluded with the written thesis and their oral defense in the fourth semester. The peers pointed out that this procedure is supported by the ASIIN criteria, but the graduation theses nevertheless have to be framed as separate modules with descriptions concerning length of the thesis, workload and duration of the module and so on. The same applies to the description of the practical work as separate modules. The modules descriptions of the graduation theses and the practical work in the degree programmes under review have to be provided by the HEI along with their statement before the peers can make their final assessment.

Criterion 3.2 Workload and credit points**Evidence:**

- curricula, Self-assessment report
- Discussions with students and programme coordinators

Preliminary assessment and analysis of the peers:

The students confirmed that they consider the workload as feasible. They stated that they feel well informed and supported. The teaching staff gave a similar estimation of the students' workload as the students themselves. The peers recognized that the HEI has a reli-

able picture of the students' workload, and that the workload is within the range of national regulations. However, in the view of the ASIIN criteria and international standards, the workload is much too high and could lead to structural pressure on the students, what in turn could impede the attainment of the intended learning outcomes. The peers judged that the students' workload per semester must be set at a level that avoids this structural pressure on the training quality.

The peers noted that a credit point system is in place. However, the peers found the calculation and distribution of ECTS to be inconsistent and not easily understandable. The allocation of ECTS to individual modules in the different curricular overviews seems to be incoherent and contradictory. The distinction between Kazakh credits and ECTS is not always clear. The peers therefore judged that the calculation of the workload in ECTS and the distribution of ECTS per semester have to be corrected. All components of the degree programmes have to be included in the calculation and distribution of credits, including practical work and graduation theses.

Criterion 3.3 Educational methods

Evidence:

- Discussion with teaching staff
- Discussion with students
- Self Assessment Report

Preliminary assessment and analysis of the peers:

The peers perceived that teaching methods and tools support the achievement of the learning outcomes at the intended level. The peers approved the strict division of the scientific and pedagogical branches of the degree programmes. The peers lauded the modern pedagogical approach in the pedagogical Bachelor's and Master's degree programmes and found the modules described and the methods used to be of a good standard. The auditors judged the practical work at schools to be a very helpful aspect for the training of students in the pedagogical degree programmes.

The peers could not discern the complete number of elective courses and their function in the degree programmes. The peers pointed out the importance of elective modules for the attainment of the intended learning outcomes and asked the HEI to provide a comprehensive list of elective modules for each degree programme for the final assessment of the peers.

The programme coordinators informed the peers that about 30% of the curricula consisted of theoretical learning, 70% of practical courses. While the peers judged the amount

and quality of practical learning in the degree programmes to be sufficient, the pointed out that respective information in the modules descriptions is missing and has to be provided for the final assessment of the peers.

The peers were told by the HEI representatives that a ratio of 2 hours of self studying for every lecture hour is prescribed by government regulations and is fixed for all degree programmes at all HEIs.

The peers noted that the English language skills of the students as well as the teaching staff are not developed enough to share in the latest scientific developments and research trends on an international level. Only a small part of the students has experience of studying abroad beyond the Russian speaking world, albeit the students acknowledge that a stay abroad would not slow down their course of study or postpone their graduation. The peers expressed the view that it is very important for the HEI to attain their self proclaimed goal of better international visibility by improving the English language skills of both students and teaching staff. They recommended to the HEI to make more use of the English language in the degree programmes and to increase academic mobility of both staff and students.

Criterion 3.4 Support and advice

Evidence:

- Self Assessment Report
- Discussions with students, teaching staff, and programme representatives

Preliminary assessment and analysis of the peers:

The students informed the peers that there is a system of students' advisors in place. Advisors support the students in managing their study plans and lend assistance in all kinds of studies related questions. The peers noted approvingly the good relationship of trust and cooperation between students and teaching staff. The peers found that sufficient resources are available for offering individual support, supervision and advice to students. The advisory methods envisage are suitable in the view of the peers for supporting students to achieve the learning outcomes and complete their degree within the normal period of time.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 3:

The peers found the calculation of credits provided by the HEI still to be lacking in consistency and completeness. The distribution and calculation of ECTS in the table seems to the peers to be hastily put together. Rows are missing, numbers and sums of credits seem

to be incorrect. Furthermore, the peers noted that there are still differences in the statement of credits between the updated list and the module handbook. The peers judged that the calculation of the workload in ECTS and the distribution of ECTS per semester have to be corrected, and that the module handbook has to be updated according to the corrected calculation of ECTS.

The new calculation confirmed the judgment of the peers that the work load of the students in all degree programmes is high. The peers therefore pointed out that the students' workload per semester must be set at a level that avoids structural pressure on training quality.

The elective modules are now clearly marked in the module description. The auditors saw that the number of elective modules in all programmes under review is sufficient to enable the students to develop an own specialization of studies.

The graduation modules and modules with practical/laboratory work have been made clear by the HEI. The peers deemed the information provided to be satisfactory.

With the above described reservations the peers judged the criterion to be fulfilled.

4. Examination: System, Concept & Implementation

Criterion 4 Exams: System, concept & implementation

Evidence:

- Self Assessment Report
- Discussion with HEI representatives and students
- Samples of exam papers and theses

Preliminary assessment and analysis of the peers:

The peers asked the HEI representatives to explain the examination organization. They learned that every grade consists of the evaluation of students' progress during the term and the final examination at the end of the module. The final examination counts for 40% of the total grade for a module. The final exams are sometimes conducted in the form of computer testing, wherein the pc chooses from a pool of questions. Written examinations have a list of questions agreed upon by the faculty. The student then draws a card with a set of questions from this list. Oral exams are applied in a number of modules, especially in the Biology degree programmes and in the defense of the graduation thesis. If a student fails to pass a module he can take the exams again at the next possible opportunity. If a student's marks are overall good he may proceed in his course of studies albeit having

failed to take an exam, but he has to retake the exams as soon as possible. A detailed examination plan is handed out to the students at the start of each semester. Nearly all of the students finish their programme in the regular time frame.

The students showed themselves satisfied with the number, content, organization, and difficulty of examinations. The peers were informed by the students that drop-out rates are low. Only during the first few semesters students do sometimes fail their exams, in later semesters this is very uncommon. The students confirmed that they get all relevant information concerning exams on time in printed matter. Examination regulations are handed out to freshmen at the beginning of their studies and are publicly available at the library. However, the peers noted that the examination regulations were missing from the documentation, provided by the HEI. The Self Assessment Report did only summarize the examination procedures and regulations. For a final assessment the peers asked the HEI to provide a set of exams regulations in an English translation.

The peers inspected a sample of examination papers and Bachelor's as well as Master's theses. They gained the impression that the overall quality of the samples reflects the level of the Bachelor's and Master's degree respectively.

The peers came to the conclusion that the ASIIN criteria regarding the examinations system, concept, and organization are all fulfilled, provided that the regulations asked for as additional documents support this estimation.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 4:

The HEI provided the relevant regulations about university and state examinations. The peers found the information given in line with the ASIIN criterion and considered it to be fulfilled.

5. Resources

Criterion 5.1 Staff involved

Evidence:

- cf. analysis of needs and capacities
- cf. staff handbook
- Self Assessment Report

Preliminary assessment and analysis of the peers:

In Kazakhstan, there are clear requirements set by the Ministry of Education and Science for the qualification of teachers for every level of programmes (at least Master's graduate for teaching Bachelor's students as Senior lecturer, PhD graduates for teaching in master's programmes; teaching staff for the educational branches must be candidates of education). These rules apply also for the HEI, and the panel deemed the staff qualification to be adequate for maintaining the programmes. The panel moreover deemed that the student-professor ratio allows for individual support of learning activities and the human resources to be sufficient for adequate implementation of the programmes under review.

Criterion 5.2 Staff development**Evidence:**

- Self Assessment report
- Discussion with the teaching staff

Preliminary assessment and analysis of the peers:

The peers observed that opportunities for further development of subject-relevant knowledge and teaching skills are available for lecturers. The members of the teaching staff declared towards the peers that they would like to do more research work on their own at the HEI instead of relying almost completely on the cooperation with external research institutions and facilities at companies. Since 2012 there is a research circle which takes part in international competitions. There are also projects with different universities throughout Kazakhstan, for example about the cloning of potatoes for the use under Kazakh geological and climatic conditions. The representatives of the rectorate pointed out towards the peers that the HEI wants to achieve the status of a research university, but unfortunately has no own PhD programmes in Chemistry or Biology. The cooperations with various institutions and companies is an opportunity for the members of the teaching staff to implement at least some own research. A reduction in teaching workload for research purposes is possible according to the rectorate. The peers could understand the difficulties of the HEI to attain a better research status. The encouraged the HEI to struggle further on their way and maximize the outcome with the available resources at hand.

Criterion 5.3 Institutional environment, financial and physical resources**Evidence:**

- Self Assessment Report
- Discussion with representatives of the rectorate, the programme coordinators and the students

Preliminary assessment and analysis of the peers:

The representatives of the rectorate declared that the financing of the degree programmes under review is secured for the accreditation period. The Ministry of Education distributes the funds for the programmes. 45% of the budget comes from the government, 50% come from the students without grants who pay for their studies themselves. The rest is made up of projects with the industry. The HEI works within the framework established by the Ministry of Education. Only a part of the resources available can be invested in equipment and laboratories. For example in 2013 the amount of 75 million Tenge was invested in laboratory equipment, which is – in the view of the peers – a moderate amount at best. The HEI has a strong interest in their professors applying for own projects at the Ministry of Education because this increases the funds available. The programme coordinators declared that the faculty cannot administer its own funds, but that all resources are centrally managed by the HEI leadership.

The facilities available are also used for commercialization and are often in joint use with companies and industry from the region. The peer panel visited some of the institutions and laboratories and could convince themselves that the overall standard of the equipment available is sufficient to support the degree programmes. The peer panel lauded the very efficient use of extant resources and materiel. The auditors noted that the HEI makes the most out of the resources at hand. However, the peers found that students and teaching staff was not always working in the laboratories according to international safety standards. The auditors therefore pointed out to the HEI that international safety standards in the laboratories have to be implemented and monitored. The auditors saw also room for improvement in the quality and number of laboratory equipment. Some of the teaching staff had pointed out that mass spectrometers, a scanning electron microscope, as well as a portable flurimeter were good to have additionally. The students remarked that they were not permitted to use all the expensive equipment by themselves but have to hand over their samples to have them processed by the laboratory staff. The peers therefore recommended to the HEI to improve the laboratory equipment according to international standards.

The peer panel observed that in some laboratories animals were bred and held in conditions which represented no species appropriate environment. Since the Subject Specific Criteria of ASIIN's Technical Committee 10 – Life Sciences demand that graduates of Biology Bachelor's degree programme "have an awareness of possible social, ethical and environment-related effects of their actions", and graduates of Master's degree programmes "are in a position to assess the social and environmental-related effects of their actions", the peers recommended to the HEI to apply common international standards of

animal protection in laboratories (for example according to the AAALAC „Guide for the care and use of laboratory animals“: <http://www.aaalac.org/resources/theguide.cfm>).

Since external facilities like research institutes or companies play a vital role in the education and training of the students in practical skills, the peers found it necessary to examine the relevant regulations regarding such work at companies or institutes outside the HEI. They asked the HEI to provide such regulations in English translation before the final assessment of the auditors.

The students declared that they have access to Scopus and can get copies of the articles they need for their studies. The costs for this are covered by the HEI. The peers found the supply with up to date literature and journal articles to be sufficient.

The peers were informed by the students that they extensively use the library and the attached computer pool for their work. The peer thought the library well equipped with modern computer work stations.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 5:

The peers took notice of the substantial information regarding practical modules provided by the HEI. However, the auditors missed the regulations governing the relationship between the HEI and their external partners, such as laboratories, research institutes and companies. Since a firm contractual and regulatory basis is very important for the students to have a reliable pool of institutions where to complete the practical education, the peers pointed out that cooperations and collaborations with institutions outside the HEI which are used for the programmes and to train students have to be subject to definitive arrangements.

Otherwise the peers judged the criterion to be fulfilled.

6. Quality Management: Further Development of Degree Programmes

Criterion 6.1 Quality assurance & further development

Evidence:

- Self Assessment Report
- Discussion with the programme coordinators

Preliminary assessment and analysis of the peers:

The peers judged that that a quality assurance concept is in place, is regularly further developed, and is designed to ensure the continual improvement of the degree programmes.

The Students expressed their view to the peers that they cannot participate in quality assurance activities and the further development of the degree programmes beyond the introduced measure of teaching evaluation, since the Ministry of Education is responsible to fulfill these tasks.

The evaluation of lectures is conducted on a regular basis. The results of the evaluation are checked by the rectorate and published on the internet. If the teaching performance of a professor is lacking, there are talks with the HEI leadership, and the participation in didactical courses is proposed. The students told the auditors that they are informed about the results of the teaching evaluation, but that they cannot see any positive changes or improvements coming from the evaluation system. However, they still feel satisfied with their programmes and the way these are regulated, since they have very good relationships with their professors and can discuss every detail in person with them and find a solution for problems.

The peers came to the conclusion that generally mechanisms and scopes of responsibility have been determined to ensure the regular further development of degree programmes. However in the light of the statement of the students they recommend to the HEI to enhance and further develop the quality management and evaluation systems to obtain comprehensive and reliable data about the quality of the degree programs. Feedback loops should be closed in the teaching evaluation and the students should be informed about the results.

Criterion 6.2 Instruments, methods and data
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Evidence:

- Self Assessment Report

Preliminary assessment and analysis of the peers:

The peers approved of the various efforts of the HEI to collect and assess data to ensure that the quality of the degree programmes is maintained and further developed. The peers saw that these measures are documented and are frequently reviewed.

The peers viewed the data gathered and evaluated by the higher education institution as sufficient to review the success and achievement of the degree programmes in any given

respect. The peers therefore judged that the basic requirements of the criteria under review were met.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 6:

The peers confirmed their original judgment regarding the criterion.

7. Documentation & Transparency

Criterion 7.1 Relevant Regulations

Evidence:

- Self Assessment Report

Preliminary assessment and analysis of the peers:

The peers found the summaries of the relevant regulations for the degree programmes under review not sufficient to judge the nature of the regulations in place. The auditors asked the HEI to provide the regulations concerning university and state examinations as well as the regulations about practical work at companies or institutes outside the HEI in an English translation before the final assessment of the peers.

Criterion 7.2 Diploma Supplement and Certificate

Evidence:

- Self Assessment Report

Preliminary assessment and analysis of the peers:

The peers missed samples of Diploma Supplements and Transcript of Records from the documentation. For their final assessment the auditors asked the HEI to provide such samples in English language for each of the degree programmes under review. The peers pointed out that the Diploma Supplement should contain information about the objectives, intended learning outcomes, structure and level of the degree programme, as well as an individual's performance.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 7:

The peers noted that the regulations regarding university and state examinations provided by the HEI were sufficient. However, as pointed out earlier, the regulations regarding practical training of the students in external companies and institutions were still

missing. The peers therefore stated that cooperations and collaborations with institutions outside the HEI which are used for the programmes and to train students have to be subject to definitive arrangements.

The sample diploma supplements provided by the HEI were in the opinion of the peers not sufficient according to the respective criterion. The peers pointed out to the HEI that a programme-specific Diploma Supplement has to be prepared and handed out to students on a regular basis providing information about the objectives, intended learning outcomes, structure and level of the degree, as well as about an individual's performance. It must also explain the educational system of Kazakhstan in order to foster comprehensibility and comparability between the educational systems.. The Transcript of records was sufficient to the requirements out of the criterion.

D Additional Documents

Before preparing their final assessment, the panel ask that the following missing or unclear information be provided together with the comment of the Higher Education Institution on the previous chapters of this report:

1. Aims for the Bachelor's degree programme Chemistry
2. Aims of all degree programmes in published form
2. Modules Descriptions for Master's programmes Chemistry and Bachelor's and Master's programmes Biology
3. Curricular overview for each degree programme according to the actual course of studies of an individual student (combining the information of the three existing spreadsheets into one).
4. List of mandatory and elective modules
5. Correct and comprehensive calculation of credits for each module and degree programme.
6. Specification of practical learning/laboratory work for the degree programmes in the modules descriptions.
7. Module descriptions for the graduation theses (Bachelor's and Master's thesis) including information about the length, nature and credit points of the thesis.
8. Regulations concerning university and state examinations.
9. Regulations about practical work at companies or institutes outside the HEI.
10. English Diploma Supplements with Transcript of Records

E Comment of the Higher Education Institution (05.02.2015)

The institution did not give a statement on the accreditation report, but provided additional documents on the following issues:

Aims for the degree programmes

Module descriptions for the Ma Chemistry and the BaMa Biology

List of mandatory elective modules

Calculation of credits for each degree programme

Specification of laboratory and practical work

Module descriptions for graduation theses

University and state examination regulations

Regulations about practical work at companies or institutes outside the HEI

English Diploma Supplements with transcript of records

F Summary: Peer recommendations (13.02.2015)

Taking into account the additional information and the comments given by the HEI the peers summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Ba Chemistry	Accredited with requirements	Eurobachelor®	30.09.2020
Ma Chemistry	Accredited with requirements	Euromaster®	30.09.2020
Ba Chemistry (educational)	Accredited with requirements	Eurobachelor®	30.09.2020
Ma Chemistry (educational)	Accredited with requirements	Euromaster®	30.09.2020
Ba Biology	Accredited with requirements	n.a.	30.09.2020
Ma Biology	Accredited with requirements	n.a.	30.09.2020
Ba Biology (educational)	Accredited with requirements	n.a.	30.09.2020
Ma Biology (educational)	Accredited with requirements	n.a.	30.09.2020

Requirements

For all degree programmes

- A 1. (ASIIN 2.3) The module descriptions must be updated according to the comments made in the accreditation report (type and duration of examination, credit points,

definition of terminology used, description of learning outcomes and contents, eradication of mistakes).

- A 2. (ASIIN 5.3) International safety standards in the laboratories have to be implemented and monitored.
- A 3. (ASIIN 3.2) The calculation of the workload in ECTS and the distribution of ECTS per semester have to be corrected.
- A 4. (ASIIN 3.2) The students' workload per semester must be set at a level that avoids structural pressure on training quality.
- A 5. (ASIIN 5.3) Cooperations and collaborations with institutions outside the HEI which are used for the programmes and to train students have to be subject to definitive arrangements.
- A 6. (ASIIN 7.2) A programme-specific Diploma Supplement has to be prepared and handed out to students on a regular basis providing information about the objectives, intended learning outcomes, structure and level of the degree, as well as about an individual's performance. It must also explain the educational system of Kazakhstan in order to foster comprehensibility and comparability between the educational systems.

Recommendations

For all degree programs

- E 1. (ASIIN 5.3) It is recommended to improve the laboratory equipment according to international standards.
- E 2. (ASIIN 5.3) It is recommended to apply common international standards of animal protection in laboratories (AAALAC „Guide for the care and use of laboratory animals“).
- E 3. (ASIIN 6.1) It is recommended to enhance and further develop the quality management and evaluation systems to obtain comprehensive and reliable data about the quality of the degree programs. Feedback loops should be closed in the teaching evaluation and the students should be informed about the results.
- E 4. (ASIIN 3.3) It is recommended to improve the English language skills of students and teachers.

G Comment of the Technical Committees

Technical Committee 09 - Chemistry (09.03.2015)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee follows the proposal of the peers.

Assessment and analysis for the award of the Eurobachelor®/Euromaster® Label:

The Technical Committee deems that the indented learning outcomes do comply with the subject knowledge areas of ECTN, but that the allocation of credits and standard of equipment is not yet up to the ECTN standards. The Technical Committee therefore recommends postponing the decision about the Eurolabel® until after the fulfillment of the requirements.

The TC 09 – Chemistry recommends the award of the seals as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Ba Chemistry	Accredited with requirements	Eurobachelor® after fulfillment of requirements	30.09.2020
Ma Chemistry	Accredited with requirements	Euromaster® after fulfillment of requirements	30.09.2020
Ba Chemistry (educational)	Accredited with requirements	Eurobachelor® after fulfillment of requirements	30.09.2020
Ma Chemistry (educational)	Accredited with requirements	Euromaster® after fulfillment of requirements	30.09.2020
Ba Biology	Accredited with requirements	n.a.	30.09.2020

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Ma Biology	Accredited with requirements	n.a.	30.09.2020
Ba Biology (educational)	Accredited with requirements	n.a.	30.09.2020
Ma Biology (educational)	Accredited with requirements	n.a.	30.09.2020

Technical Committee 10 – Life Science (12.03.2015)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee suggests to replace the requirements A3 and A4 regarding the workload and the calculation of credits by the standard formula approved by the Accreditation Commission on the meeting of December 2014. Because of the importance of requirement 2 for the well being and safety of the students, the Technical Committee suggests putting requirement A2 on the first place.

Assessment and analysis for the award of the Eurobachelor®/Euromaster® Label:

The Technical Committee deems that the indented learning outcomes do comply with the subject knowledge areas of ECTNA.

The TC 10 – Life Science recommends the award of the seals as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Ba Chemistry	Accredited with requirements	Eurobachelor®	30.09.2020
Ma Chemistry	Accredited with requirements	Euromaster®	30.09.2020

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Ba Chemistry (educational)	Accredited with requirements	Eurobachelor®	30.09.2020
Ma Chemistry (educational)	Accredited with requirements	Euromaster®	30.09.2020
Ba Biology	Accredited with requirements	n.a.	30.09.2020
Ma Biology	Accredited with requirements	n.a.	30.09.2020
Ba Biology (educational)	Accredited with requirements	n.a.	30.09.2020
Ma Biology (educational)	Accredited with requirements	n.a.	30.09.2020

H Decision of the Accreditation Commission (27.03.2015)

Assessment and analysis for the award of the ASIIN seal:

There is a short discussion about requirement A1 and the question if international safety standards for the laboratory work should be applied or if the national standards are sufficient. The accreditation commission agrees that especially in chemistry safety standards are very important and that international standards should be applied.

For this reason the accreditation commission follows the suggestions of the technical committees 09 and 10 concerning requirement A 1.

The accreditation commission accepts that for requirements A 3 and A 4 standard formulations are used.

In requirement A 5 the accreditation commission wants to mention the name of the HEI.

Assessment and analysis for the award of the Eurobachelor®/ Euromaster® Label:

The accreditation commission holds the opinion that the intended learning outcomes of the degree programmes correspond with the ECTS criteria.

The Accreditation Commission for Degree Programmes decides about the award of the ASIIN Seal and the Eurobachelor®/ Euromaster® Label as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Ba Chemistry	Accredited with requirements for one year	Eurobachelor®	30.09.2020
Ma Chemistry	Accredited with requirements for one year	Euromaster®	30.09.2020
Ba Chemistry (educational)	Accredited with requirements for one year	Eurobachelor®	30.09.2020

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Ma Chemistry (educational)	Accredited with requirements for one year	Euromaster®	30.09.2020
Ba Biology	Accredited with requirements for one year	n.a.	30.09.2020
Ma Biology	Accredited with requirements for one year	n.a.	30.09.2020
Ba Biology (educational)	Accredited with requirements for one year	n.a.	30.09.2020
Ma Biology (educational)	Accredited with requirements for one year	n.a.	30.09.2020

Requirements

For all degree programmes

- A 1. (ASIIN 5.3) International safety standards in the laboratories have to be implemented and monitored.
- A 2. (ASIIN 2.3) The module descriptions must be updated according to the comments made in the accreditation report (type and duration of examination, credit points, definition of terminology used, description of learning outcomes and contents, eradication of mistakes).
- A 3. (ASIIN 3.2) If ECTS credits are used, the transformation of the Kazakh credit points into ECTS points must correspond to the ECTS regulation that one ECTS credit point is awarded for 25-30 hours student workload.
- A 4. (ASIIN 3.2) Student workload must be adjusted and balanced throughout the course of the study in order to avoid structural pressure on teaching and learning quality.

The quality management system must ensure that student workload and ECTS correspond.

- A 5. (ASIIN 5.3) Cooperations and collaborations with institutions outside the East-Kazakhstan State University which are used for the programmes and to train students have to be subject to definitive arrangements.
- A 6. (ASIIN 7.2) A programme-specific Diploma Supplement has to be prepared and handed out to students on a regular basis providing information about the objectives, intended learning outcomes, structure and level of the degree, as well as about an individual's performance. It must also explain the educational system of Kazakhstan in order to foster comprehensibility and comparability between the educational systems.

Recommendations

For all degree programs

- E 1. (ASIIN 5.3) It is recommended to improve the laboratory equipment according to international standards.
- E 2. (ASIIN 6.1) It is recommended to enhance and further develop the quality management and evaluation systems to obtain comprehensive and reliable data about the quality of the degree programs. Feedback loops should be closed in the teaching evaluation and the students should be informed about the results.
- E 3. (ASIIN 3.3) It is recommended to improve the English language skills of students and teachers.

For the biology degree programs

- E 4. (ASIIN 5.3) It is recommended to apply common international standards of animal protection in laboratories (AAALAC „Guide for the care and use of laboratory animals“).

I Fulfilment of Requirements (02.02.2016)

Analysis of the peers (23.02.2016)

The peers consider all the requirements to be fulfilled. A documented management system for the control of international safety standards has been implemented. This system should be verified during the reaccreditation (A1). The module descriptions have been updated according to the comments in the accreditation report. There are still some points to improve, especially with respect to the use of the English language and the elimination of obviously not fitting parts (A2). The HEI provided a detailed explanation how the Kazakh credits are calculated and how they correspond to the ECTS system (A3). The students workload is balanced throughout the degree programme and its calculation is comprehensible. Only the control of the students workload by a quality management system has not been documented (A4). The HEI has properly documented its cooperations and collaborations (A5). A general Diploma Supplement has been provided, but the programme specific information is missing. The Diploma Supplement should be checked during the reaccreditation (A6).

The peers recommend the award of the seals as follows:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Chemistry (Natural-Scientific Direction)	All requirements fulfilled*	Eurobachelor®	30.09.2020
Ma Chemistry (Natural-Scientific Direction)	All requirements fulfilled*	Euromaster®	30.09.2020
Ba Chemistry (Pedagogical Direction)	All requirements fulfilled*	Eurobachelor®	30.09.2020
Ma Chemistry (Pedagogical Direction)	All requirements fulfilled*	Euromaster®	30.09.2020
Ba Biology (Natural-Scientific Direction)	All requirements fulfilled*	n.a.	30.09.2020
Ma Biology (Natural-Scientific Direction)	All requirements fulfilled*	n.a.	30.09.2020

Ba Biology (Pedagogical Direction)	All requirements fulfilled*	n.a.	30.09.2020
Ma Biology (Pedagogical Direction)	All requirements fulfilled*	n.a.	30.09.2020

Analysis of the Technical Committee 09 - Chemistry (10.03.2016)

The TC 09 – Chemistry recommends the award of the seals as follows:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Chemistry (Natural-Scientific Direction)	All requirements fulfilled*	Eurobachelor®	30.09.2020
Ma Chemistry (Natural-Scientific Direction)	All requirements fulfilled*	Euromaster®	30.09.2020
Ba Chemistry (Pedagogical Direction)	All requirements fulfilled*	Eurobachelor®	30.09.2020
Ma Chemistry (Pedagogical Direction)	All requirements fulfilled*	Euromaster®	30.09.2020
Ba Biology (Natural-Scientific Direction)	All requirements fulfilled*	n.a.	30.09.2020
Ma Biology (Natural-Scientific Direction)	All requirements fulfilled*	n.a.	30.09.2020
Ba Biology (Pedagogical Direction)	All requirements fulfilled*	n.a.	30.09.2020
Ma Biology (Pedagogical Direction)	All requirements fulfilled*	n.a.	30.09.2020

Analysis of the Technical Committee 10 – Life Sciences (03.03.2016)

The TC 10 – Life Sciences recommends the award of the seals as follows:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Chemistry (Natural-Scientific Direction)	All requirements fulfilled*	Eurobachelor®	30.09.2020
Ma Chemistry (Natural-Scientific Direction)	All requirements fulfilled*	Euromaster®	30.09.2020
Ba Chemistry (Pedagogical Direction)	All requirements fulfilled*	Eurobachelor®	30.09.2020
Ma Chemistry (Pedagogical Direction)	All requirements fulfilled*	Euromaster®	30.09.2020
Ba Biology (Natural-Scientific Direction)	All requirements fulfilled*	n.a.	30.09.2020
Ma Biology (Natural-Scientific Direction)	All requirements fulfilled*	n.a.	30.09.2020
Ba Biology (Pedagogical Direction)	All requirements fulfilled*	n.a.	30.09.2020
Ma Biology (Pedagogical Direction)	All requirements fulfilled*	n.a.	30.09.2020

Decision of the Accreditation Committee (08.04.2016)

The Accreditation Commission for Degree Programmes decides about the award of the ASIIN Seal and the *Eurobachelor®/ Euromaster®* Label as follows:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Chemistry (Natural-Scientific Direction)	All requirements fulfilled*	Eurobachelor®	30.09.2020
Ma Chemistry (Natural-Scientific Direction)	All requirements fulfilled*	Euromaster®	30.09.2020

Ba Chemistry (Pedagogical Direction)	All requirements fulfilled*	Eurobachelor®	30.09.2020
Ma Chemistry (Pedagogical Direction)	All requirements fulfilled*	Euromaster®	30.09.2020
Ba Biology (Natural-Scientific Direction)	All requirements fulfilled*	n.a.	30.09.2020
Ma Biology (Natural-Scientific Direction)	All requirements fulfilled*	n.a.	30.09.2020
Ba Biology (Pedagogical Direction)	All requirements fulfilled*	n.a.	30.09.2020
Ma Biology (Pedagogical Direction)	All requirements fulfilled*	n.a.	30.09.2020

The Accreditation Commission for Degree Programmes decides, to include the following hint into the letter of decision:

„The university should take notice that in the course of the reaccreditation procedure the peers will check, if a sufficient quality management system for the monitoring of the students` workload has been established, if the English wording of the module descriptions has improved and if the degree specific diploma supplements have been issued.“