

ASSESSMENT REPORT

Pharmacy (Specialist)

at
**I.M.Sechenov
First Moscow State
Medical University,
Russian Federation**

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IMPRINT

evalag (Evaluationsagentur Baden-Württemberg)
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1. I.M. Sechenov First Moscow State Medical University

I.M. Sechenov First Moscow State Medical University (Sechenov University) was founded in 1758 as medical faculty of Imperial Moscow University. It is considered the oldest medical university in Russia. Today the clinical campus is situated in the Khamovniki district in central Moscow. Sechenov University offers training, certification and postgraduate studies to (future) physicians and pharmacists promoting thus further advance of medical science and healthcare domestically and on a global scale. The university activities cover three main areas: education, research, and healthcare. It has one of the biggest scientific medical libraries in Europe, two clinical simulation centres and its own botanic garden.

About 2,500 academic staff members at ten faculties provide training in General Medicine, Pharmacy, Dentistry, Preventive Medicine, Paediatrics, Biotechnology, Bioengineering & Bioinformatics, Social Work, Clinical Psychology, Public Health, Healthcare Economics & Management, Materials Science and Technology, etc. for more than 17,000 students, about 2,000 of them at postgraduate level. About 85% of academic staff has a scientific degree.

The University Research Center consists of seven research institutes, more than 30 laboratories and research departments, the Research Coordination Council, and the Coordinating Department for Young Scientists. To integrate education and research, specialised departments and research sub-divisions are combined into research complexes and centres.

19 diversified university hospitals (4,000 beds) with the Central Medical Diagnostic Laboratory, the Center of Restorative Medicine and Rehabilitation, the Department of Radiology with seven sub-departments, and 16 inter-clinical services annually provide care for about 62,000 inpatients and over 300,000 outpatients.

Institute of Pharmacy

The Institute of Pharmacy consists of 11 departments with 175 instructors working there, among them 98 candidates and 39 doctors of science. About 300 students per year graduate and later find occupation in various areas of medicine and pharmacy as pharmacists, biotechnologists, bioengineers and bioinformaticians. The institute's teaching personnel follow an interdisciplinary modular approach for teaching students, including online education and foreign language education.

Table 1 shows an overview of key data on the Institute of Pharmacy (academic year 2018/19):

Responsible academic unit/faculty	Institute of Pharmacy
Number of study programmes	7
Undergraduate	1
Graduate	2
Postgraduate	4
Number of students in the faculty	1,600
Undergraduate	76
Graduate	1,401

Postgraduate	123
Part-time students	12
Full-time academic staff in faculty	119
Teaching load	850 h per week
Part-time academic staff (heads and FTE)	118 and 39
Administrative and technical staff (faculty level)	61
1 st year students (faculty level)	312
Graduates (faculty level)	248
Drop-out rate (faculty level)	34 (+29 for academic leave)
Floor space (m ²)	13,602.10 square metre
Media in faculty library (books, journals, digital media)	<p><u>Books:</u></p> <p>Teaching fund 160,204 copies / 710 titles</p> <p>Scientific fund 18,139 copies / 11,028 titles</p> <p><u>Journals:</u> 66 titles</p> <p><u>Digital media:</u> 1,310 titles</p>
Faculty budget	~ 330,000,000.00 rub. (~ € 4,600,000.00)

Tab. 1: Information on the Institute of Pharmacy (Source: Sechenov University 2019)

In 2015, Sechenov University joined the Russian academic excellence project “Project 5-100” which aims to promote at least five Russian universities into the top 100 of the world's best institutions of higher education.¹ Within the framework of “Project 5-100”, the Institute of Pharmacy is implementing partnership programmes with national and international pharmaceutical companies. Partners of Sechenov University are major players in the pharmaceutical industry, such as Roche, Biocad, AstraZeneca Russia, Angelini, Merck, Bionorica and others. Leading experts of the pharmaceutical industry are actively involved in the educational and methodological work of the departments of the institute.

Since 2016, graduate licensed pharmacists pass primary accreditation in the specialty Pharmacy. Every year, 95% of graduates successfully confirm their readiness for professional activity.

2. The accreditation procedure

The assessment procedure was carried out in the form of an informed peer review on the basis of the self-evaluation report provided by Sechenov University, a two-day site

¹ Cf. <http://5top100.com> (accessed 15 July 2019)

visit of an international expert panel, an assessment report by the expert panel and the accreditation decision which is taken by **evalag**'s Accreditation Commission.

The procedure applies the fitness for purpose approach which assesses to what extent a programme complies with the criteria for programme accreditation. These are formulated in coherence with the European Standards and Guidelines (ESG).

These criteria focus, first of all, on the profile of the programme and its curriculum. Further, the criteria cover all aspects of the implementation of a study programme, its quality assurance and its resources. With regard to the criteria of programme profile and curriculum, **evalag** also assesses if the programme meets academic standards that are accepted in Europe and internationally.

The following six criteria are used:

- Programme profile
- Curriculum
- Student assessment
- Organisation of the study programme
- Resources
- Quality assurance

The experts express the extent of compliance of the criteria with the following assessments: passed, passed subject to conditions, suspension of the accreditation procedure or failed. Depending on the degree to which a programme meets the criteria, the programme will be accredited, accredited with conditions or not accredited.

As a first step of the procedure and in preparation for the site visit, Sechenov University provided a self-evaluation report based on guidelines provided by **evalag**. At the same time **evalag** formed an expert panel consisting of four experts including one student expert (Annex 2):

Academic experts:

- Prof. Dr. Angelika Vollmar, Head of Pharmaceutical Biology, Department of Pharmacy – Centre for Drug Research, University of Munich – Dean of Faculty Chemistry and Pharmacy, LMU (Germany)
- Prof. Dr. Andreas Link, Professor of Pharmaceutical/Medicinal Chemistry, Institute of Pharmacy, University of Greifswald (Germany), Vice President of the German Pharmaceutical Society (DPhG)

Expert from professional practice:

- Dr. Alexandra Steckel, Business Development Manager at Alfred E. Tiefenbacher GmbH & Co. KG, Hamburg (Germany)

Student expert:

- Ms. Liubov Krant, Student of Pharmacy, University of Kiel (Germany), selected by BPhD – Association of Students of Pharmacy in Germany

All experts declared to be free of any conflict of interest.

The site visit (Annex 1) took place from 23 to 24 May 2019 at Sechenov University. During the site visit the expert panel met the leadership of the university and the faculty, academic and administrative staff, and students and visited selected facilities of the university (library, laboratory).

The expert panel produced an assessment report which was submitted to the university for correction of potential factual errors on 8 August 2019.

From **evalag**'s side, Georg Seppmann coordinated and carried out the project, with back office assistance of Elena Gladkova in Mannheim.

The experts thank the organisers of the visit schedule for all the opportunities for additional questions and the open discussion, esp. Mr. Igor Lunkov from Sechenov University International Office for his excellent and highly professional support on the preparation the procedure, during the site visit, and afterwards.

The following assessment report is structured according to the six assessment criteria, which are the basis for the decision about the **evalag** international programme accreditation. After a short description of the criterion, each chapter starts with a presentation of the current status regarding the criterion which is based on the information from the self-assessment report of the university and the information acquired during the site visit. On this basis, the expert panel assesses the criterion. Finally, the experts provide their recommendations for further improvement.

3. Programme assessment

3.1 Programme profile

The profile and objectives of a study programme is an essential criterion for the assessment. The experts have to evaluate, whether the objectives of the programme are in line with the profile and the strategic goals of the institution. Further, they assess if the intended learning outcomes of the programme are well defined, publicly accessible and whether they correspond to the type and level of qualification provided by the programme. They also consider whether the intended learning outcomes are based on academic or professional requirements (standards), public needs and the demands of the labour market and if they contribute to the employability of the graduates. The experts have to evaluate the programme's relation to research (procurement of scientific methods in theory and practice, research based teaching). The experts assess whether the profile and objectives of the programme comply with internationally accepted standards. The experts consider the international dimension of the programme and verify whether the qualification of the academic staff is adequate in terms of the profile and the objectives of the programme.

Current status

Programme profile and objectives

The study programme "Pharmacy" is a 5-year full-time specialist programme at Sechenov University.² The following table shows some statistical information on the study programme:

² In the Russian higher education system "Specialist" programmes of five or more years duration exist besides Bachelor and Master programmes.

Name of study programme	Pharmacy
Founding year	2011 (English-medium)
Final degree	Pharmaceutical Chemist³
Duration of study	5 years
Credits (ECTS or other system)	300
Capacity per semester/study year	60
Number of students (actual semester)	611
Full-time	611
Part-time	0
Number of graduates (from the beginning)	314
1 st year students (actual semester)	105
% international students	24%
Drop-out rate (actual semester)	2
Drop-out rate (average in last 5 semesters)	7
Full-time academic staff in the programme	78
Part-time academic staff in the programme	46

Tab. 2: Data on the study programme

The pharmacy programme is multidisciplinary and includes a great number of disciplines in the biomedical and chemical units, as well as special disciplines. The practice-oriented programme is focused on training of pharmaceutical chemists able to carry out self-dependent pharmaceutical practice. It qualifies the graduates for working as pharmacists in all areas of the health sector, of the pharmaceutical industry (e.g. pharmaceutical manufacturing, pharmacy organisations, laboratories, regulatory authorities, etc.) and in the field of education, science and research. The objectives of the programme are the development of universal, general vocational and professional competencies to enable graduates' professional success. Beside the professional competencies, students should also develop their social and personal qualities, namely purposefulness, self-discipline, industriousness, responsibility, civil consciousness, sociability, tolerance. The key objectives are described as follows:

- to contribute to the graduates' formation of knowledge, skills and abilities necessary for solving the tasks of professional activity,
- to develop competencies and personal and professional qualities,
- to inspire students' creative abilities in problem solving,
- to contribute to the graduates' formation of socially responsible behaviour, understanding and acceptance of social and ethical needs and values, and the ability to work in a team.

³ Russian "Провизор", corresponding to German "Apotheker" (=pharmacist).

The tasks and qualification goals are documented in detail in the “Regulations on the Basic Vocational Educational Program of Higher Education – in the specialty ‘Pharmacy’”.⁴ They follow the “Federal State Educational Standard of Higher Education in the specialty ‘Pharmacy’”.⁵

After graduation, graduates of the programme have the opportunity to enter a residency programme or to do their PhD programme (for educational fee).

Sechenov University sees its institutional function in developing “medicine of the future” on a solid academic basis of clinical medicine broadening the horizons with proactive multidisciplinary studies. Its mission lies in thoroughly and continually improving the lives of individuals through achieving differentiated excellence in the fields of multidisciplinary translational biomedical research and cutting-edge research-based education with a focus on innovation, development, and implementation.

In this context, all study programmes are designed as a combination of core competencies, professional competences and soft skill competences (see tab. 3 below).



Tab. 3: Sechenov University’s educational approach
(Source: <https://www.sechenov.ru/eng/applicants/why-sechenov/>, accessed 15 July 2019)

Learning outcomes

At the end of the five years’ study, graduates have obtained knowledge and skills necessary for their later professional activity, either in the field of education and research, healthcare or in administration and management. The programme’s learning outcomes are:

- pharmaceutical/pharmacological knowledge (combined with knowledge in the neighbour sciences to pharmacy, e.g. biology, botany, chemistry, medicine (anatomy, physiology etc.))
- practical analytical skills
- proficiency with scientific methods
- proficiency with technological and quality processes in pharmaceutical production
- project organisation and management skills
- legislative and regulative knowledge

⁴ <https://www.sechenov.ru/univers/structure/institute/institut-farmatsii/od-iftm/napravleniya-podgotovki/farmatsiya/> (accessed 15 July 2019)

⁵ <http://fgosvo.ru/uploadfiles/fgosvospec/330501.pdf> (accessed 15 July 2019)

Interim and final assessments are used to secure the achievement of the intended learning outcomes.

Relation to academic and professional requirements and public needs

Sechenov University's strategy of training pharmaceutical personnel is aimed at providing the healthcare and pharmaceutical industry with highly qualified pharmaceutical personnel, thus improving the quality and accessibility of medical care. Content design of the programmes follows major trends in the development of the national health care system as well as current trends in Russian economy and society.

Close contact between the university and stakeholders in the society, industry and politics as well as cooperation with internships in national and international pharmaceutical companies impact on the (further) development of study programmes against the dynamics and the changing needs in the pharmaceutical sector.

According to the self-evaluation report, graduates of the "Specialist" programme in pharmacy are in demand in pharmaceutical, medical organisations, biotechnology and other related fields, such as:

- law enforcement and regulatory agencies (e.g. Ministry of Health);
- government agencies operating in the field of movement of medicines (e.g. Federal Service for the Supervision of Health);
- pharmaceutical organisations (pharmacies, pharmaceutical warehouses);
- pharmaceutical companies;
- scientific organisations;
- national and international research, projects and programmes in the field of pharmacy; academia;
- public health organisations.

The Institute of Pharmacy regularly monitors the employment of its graduates and analyses feedback from their employers.

The strict criteria for the admission of applicants, the structured educational and methodological process and the continuous assessment during the studies are expected to guarantee that the graduated specialists meet the requirements of their later work routine. Besides, close multilateral interaction of Sechenov University with the pharmaceutical industry contributes to the independent assessment of the quality of education and provides high-quality training for graduates. Lectures and workshops by representatives from international pharmaceutical companies are regularly held. Especially such cooperation with the pharmaceutical industry ensures a regular update of the educational programme.

Relation between study and research

The study programme provides several research topics and methods. According to both the self-evaluation report and the interviews during the site visit, the instructors and trainers regularly update study materials with the state-of-the-art scientific achievements and recent findings from the pharmaceutical area.

Research is made an integral part of the curriculum: 450 hours are reserved for practical research work (300 hours of independent work, 150 hours in classroom). Research can be done in several fields, e.g. bioinformatics and drug design, experimental and clinical immunopathology, working with laboratory animals, molecular modelling, organisation of preclinical and clinical studies, etc. Students choose subject for research

and research supervisors from among the higher-education teaching personnel members who coordinate research projects of students. The most relevant results of research are included as elements in the educational process.

The research supervisors support students with methodological assistance in statement of the research topic, developing the research design, collecting and analysing materials, and preparing the documentation of research work. Besides, the university provides students with the opportunity to publish the research outcomes in scientific journals and participate in scientific conferences.

All departments have student scientific circles that allow students to do extracurricular research in accordance with their scientific interests and professional training and work during the entire period of study, starting from the first year.

International dimension

The study language of the programme is English and/or Russian: Students can choose a pure English track for studying, depending on their language capabilities (and they are even allowed to change to Russian again).

By and large, the programme follows the basic requirements for pharmaceutical education in the European Union⁶ that requires at least four years of full-time theoretical and practical education at a university or a higher education institution and for six months of internship in a public pharmacy or in a hospital under the supervision of the pharmaceutical division of this hospital. Thus, in the specialist programme's theoretical training is carried out within four years, supported by educational practices, theoretical training is completed at the 5th year and most of the time is given to practical training at the bases of pharmacy organisations, pharmaceutical companies and research institutions.

Currently, 154 students from 21 countries abroad (namely from Iran, Vietnam, Syria, Morocco, Israel, Namibia, Tunisia, etc.) are enrolled in the programme. Around 20 students take annually part in student exchange programmes with universities in Belarus, Kazakhstan, China and Bulgaria. Within the framework of several bilateral agreements with universities in Europe and the US internships for research in university laboratories can be organised.

Last not least, several instructors at the Institute of Pharmacy have international background. Besides, international exchange opportunities for higher-education teaching personnel also exist.

Staff qualification (see also criterion 5)

The requirements for the level of education of the teaching staff are regulated by the Federal State Educational Standard. Instructors have to provide evidence of their high qualification in teaching and research. In the academic training, instructors from the Institute of Pharmacy as well as from the Medical Department, the Institute of Public Health, the Institute of Translational Medicine and Biotechnology, the Institute of Linguistics and the Laboratory of the Biomedicine Scientific and Technological Park are involved: The medical unit disciplines are taught in the departments of the Medical Department (anatomy, physiology); microbiology, hygiene, pharmacoepidemiology and are taught by the departments of the Institute of Public Health; biotechnology, develop-

⁶ Cf. Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2006

ment of antiviral drugs, analytical toxicology are taught by the departments of the Institute of Translational Medicine and Biotechnology. The students learn basic Latin under the guidance of instructors of the Institute of Linguistics.

27 units of the university – 26 departments and one laboratory – are involved in the programme. The programme implementation is supervised by both the Director of the Institute of Pharmacy and the Head of the Educational Department of the institute. Other functions are distributed among employees: implementation of the programme, teaching, examination, etc. All staff members participate in research activities in their fields of knowledge and qualification and link it with teaching contents. Besides, further qualification as well as improvement of teaching methods and personal staff training play an important role at Sechenov University. Continuous education of staff is mandatory.

Staff recruiting is achieved by regularly published vacancies. The main criteria for staff recruiting are:

- academic degree,
- work experience in the taught discipline,
- participation in research,
- publications.

In order to confirm their compliance to their positions academic teachers are regularly assessed.

Assessment

Programme profile and objectives

During their site visit the experts observed the university's strong mission as a centre of excellence in medical and pharmaceutical education and research which is promoted by all representatives the experts could talk with. The experts highlight how convinced and dedicated staff, students and alumni presented themselves.

According to the view of the expert panel, the objectives of the study programme "Pharmacy (Specialist)" are fully in line with the profile and the strategic goals of Sechenov University.

The experts appreciate that students can decide for English or Russian as teaching language as well as they can chose between different scientific focuses.

Learning outcomes and relation to academic and professional requirements and public needs

The programme's intended learning outcomes are well defined, publicly accessible both in English and Russian language. According to the expert panel they fully correspond to the type and level of qualification provided by the programme. The learning outcomes and the programme itself are in line with international academic and professional requirements (standards). Regular update processes of the programme consider public needs and the demands of the labour market and according to the interviews with students and alumni, they contribute to the employability of the graduates. The experts appreciate the structured management of all student affairs.

Relation between study and research

The experts note that there is a stable connection and adequate share between teaching and research in the study programme. Scientific methods in theory and practice are provided on a high level. Research based training can also be observed.

International dimension

International standards in teaching and in pharmaceutical research are met. The experts appreciate the interdisciplinary approach of the study programme. Modules taught in English language contribute to the international state-of-art. The experts appreciate that international staff is involved in teaching and research.

Staff qualification (see also criterion 5)

The qualification of the teaching staff seems to be adequate in terms of the profile and the objectives of the programme. In the view of the experts the relation between full-time and half-time staff is also appropriate. The experts note that teaching is carried out by dynamic and motivated lecturers who are highly experienced in teaching. Some of the teachers have international working and/or educational experience.

The experts recognise that there are explicit criteria for staff recruitment and that the recruitment process itself seems to be well developed.

Obviously, a variety of teaching methods is used. The experts appreciate that the university offers different opportunities to teaching staff for improving their teaching methods and has invented a system of incentives for staff. Nevertheless, research based teaching should be further developed.

Areas for improvement

According to the experts' opinion, the English presentation of the programme on the website could be made more visible and consistent. If Sechenov University intends to attract more students from abroad, international marketing measures should be improved. For this purpose the amount of international cooperation and partnerships among universities as well research institutes and pharmaceutical industry with a strong R&D focus could be increased.

PhD students could become more involved into teaching in the programme.

Recommendations

Students should be further encouraged to improve their English writing abilities.

Research based teaching should be further developed.

The possibilities for international work experiences of staff should be further increased beyond short-term stays. Teachers should also be encouraged by incentives for international exchange.

3.2 Curriculum

The second criterion concerns the curriculum as well as the teaching and learning methods. The expert panel evaluates, whether the curriculum of the programme is adequately structured to achieve the intended learning outcomes and whether the curriculum provides the necessary knowledge and methodological expertise of the relevant discipline(s). The experts also evaluate the organisation of the learning process, especially if there are appropriate student-centred teaching and learning methods, if students are encouraged to take an active role in creating the learning process and whether the diversity of students and their needs is taken into account.

Table 4 on the next pages shows the curriculum, distributed over the five years of studying.

Specialty **33.00.00 Pharmacy**

Qualification

Specialist degree

Form of training **Full-time**

Normative total duration of study **5 years**

Total duration of study **5 years**

Period of study **from 01.09.2018 to 31.08.2023**

Approved

P.V.Glybochko

Chairperson, Academic Council of the

I.M. Sechenov First Moscow State Medical

University

14 January 2019

Protocol No

Curriculum of Basic Professional Educational Program of Higher Education (BPEP HE)

№	Division by Semesters	Division by Semesters	HOURS										Distribution by years and semesters																														
			Classroom					Independent Study Work					1 year		2 year		3 year		4 year		5 year																						
			Examinations	Pass-Fail Examinations	GRAND TOTAL	Lectures	Laboratory courses	Practical Training	Clinical Practical Training	Seminars	GRAND TOTAL	Lectures	Seminars, Pract Tdsing	Credits	Lectures	Seminars, Pract Tdsing	Credits	Lectures	Seminars, Pract Tdsing	Credits	Lectures	Seminars, Pract Tdsing	Credits																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44

Unit 1. Disciplines (Modules)

№	Discipline (Module)	1 year		2 year		3 year		4 year		5 year	
		Lectures	Seminars, Pract Tdsing	Lectures	Seminars, Pract Tdsing	Lectures	Seminars, Pract Tdsing	Lectures	Seminars, Pract Tdsing	Lectures	Seminars, Pract Tdsing
1	B.1 Introduction to the specialty	30	14	42	3						
2	B.2 History	18	18	2							
3	B.3 History of medicine and pharmacy	18	18	2							
4	B.4 Latin Language	30	56	3							
5	B.5 Chemistry of biogenic elements	30	8	48	3						
6	B.6 Medical and biological physics	30	10	12	34						
7	B.7 Human Anatomy	30	14	42	3						
8	B.8 Organic Chemistry	90	18	62	4	12	28	2	12	40	3
9	B.9 Foreign language	60	3	60	3	52	3				
10	B.10 Philosophy	20	24	2							
11	B.11 Physiology	24	24	4	8	24	2				
12	B.12 Applied bioanalytics	20	2	28							
13	B.13 Pathology	18	42	3	12	40	3				
14	B.14 Microbiology	24	24	2							
15	B.15 Analytic Chemistry	18	42	3	8	32	2	18	54	4	
16	B.16 Pharmacology	12	28	2	8	32	2	12	48	3	8
17	B.17 Physical and Colloid Chemistry	60	24	88							
18	B.18 Medical biochemistry	60	30	82							
19	B.19 Botany	60	30	82							
20	B.20 Public safety	20	2	28							
21	B.21 General pharmaceutical chemistry	90	32	140							
22	B.22 Methods of pharmaceutical analysis	140	32	172							
23	B.23 Pharmacopidemiology	20	24	2							
24	B.24 Medical and pharmaceutical merchandising	30	44	12							
25	B.25 Pharmacotherapy	60	30	82							
26	B.26 General pharmaceutical technology	60	20	82							
27	B.27 Pharmacology	90	42	130							
28	B.28 Management and economics of pharmacy	120	180	300							
29	B.29 Basics of development and manufacturing of immunological drugs	30	44	12							
30	B.30 Basics of biotechnology	60	20	82							
31	B.31 Natural product drugs	30	12	44							
32	B.32 Toxicological Chemistry	60	30	82							

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Current status

Programme structure

The study programme “Pharmacy (Specialist)” is a five-year full-time educational programme with 300 credits⁷ that includes 42 core disciplines or modules, 9 variable disciplines, 8 blocks of elective disciplines, 8 practices and state final examination. Among the electives, students can compile their curriculum modules according to their priority and depending on their own educational background and interests. The language of instruction can be chosen between English and Russian.

The curriculum specifies the list, intensity, consistency and breakdown by periods of disciplines (modules), practices, intermediate and final (state) certification of students. Credit units are used as a standardized measure of study load intensity when specifying the capacity of a programme or its components.

Table 4 on the previous pages shows the curriculum, distributed over the five years of studying.

The curriculum reflects the number of both contact hours with an instructor (consultations, certification tests, classes of lecture and seminar types) and independent student educational work hours.

It is distinguished between disciplines, practices and assessment. For each discipline and practice the intermediate assessment form (credit, examination) is named.

Each discipline or module is described in detail in the “Annotations of Disciplines” where following is listed

- content,
- learning outcomes,
- workload,
- assessment

for each discipline or module. Table 5 on the following page shows an example of the description of modules.

Mechanisms for providing knowledge and application of scientific methods

Scientific methods are taught in classes and practices. To secure the actuality of both content and the scientific state-of-art, the university annually revises its educational programmes, taking into account the development of science, technology, culture, economics, technology, and the social sphere through their approval and recertification. Global achievements in the discipline are reflected in:

- correction of the content of lectures and classes;
- updating evaluation tools with the latest scientific advances;
- utilization of advanced educational technologies;
- student's ability to choose the most advanced areas of research;
- ability of obtaining practical skills in the most advanced organisations aimed at high results in the field of pharmaceutical activity.

⁷ One credit unit is equivalent to 36 academic hours (1 hour = 45 minutes) or 27 astronomical hours (1 hour = 60 minutes) for all types of students' study and individual work, practice, research work, knowledge assessment.

<p>Organic chemistry. 9 c.u. <i>The content of the discipline:</i> Basics of structure, reactivity and methods for the identification of organic compounds. Classification, nomenclature, isomerism of organic compounds. Stereoisomerism: conformational and configurational stereoisomers. Mutual influence of atoms in organic compounds, electronic effects. Aromatic. Acid and basic properties of organic compounds. Electronic, IR, NMR-1H spectroscopy, mass spectrometry. Hydrocarbons; alkanes, alkenes, arenes. Homofunctional compounds containing halogen-, hydroxy-, thio- and hydroxy groups; halogen derivatives of hydrocarbons, alcohols, phenols, thiols, ethers and thioethers. Carbonyl-containing compounds; aldehydes and ketones, carboxylic acids and their functional derivatives. Sulfonic acids and their functional derivatives. Nitrogen-containing compounds: amines, diazo compounds, azo compounds. Heterofunctional compounds: halogeno-, hydroxy, amino-, oxo-acids, amino alcohols, aminophenols, phenoxy-acids. Keto-enol tautomerism. α-Amino acids, peptides, proteins. Carbohydrates: monosaccharides, oligo- and polysaccharides. Heterocyclic compounds. Nucleic acids, nucleotide coenzymes, nucleoside polyphosphates. Alkaloids. Lipids. Terpenoids. Steroids. <i>Specification of learning outcomes</i> As a result of mastering the discipline, the student have to: <i>Be able to</i></p> <ul style="list-style-type: none"> - Determine the affiliation of compounds to certain classes and groups based on classification criteria; to formulate the form by name and give the name of the structural formula in accordance with the rules of the international nomenclature of IUPAC - Determine the presence and type of acid and basic centers and give a comparative assessment of the strength of acidity and basicity of organic compounds. - Create optimal ways of synthesizing the specified organic compounds and choose rational approaches to identification using a complex of physicochemical methods. To isolate, purify and identify the given synthesized substances. - Experimentally determine the presence of certain types of functional groups and specific fragments in the molecule using qualitative reactions. - Set up a simple teaching and research experiment based on mastering the basic techniques of working in the laboratory, perform calculations, compile reports and abstracts on work, use reference material. <p><i>Teaching methodology.</i></p> <table border="1"> <thead> <tr> <th><i>Form of working</i></th> <th><i>Discipline hours</i></th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>42</td> </tr> <tr> <td>Laboratory workshops</td> <td>62</td> </tr> <tr> <td>Practical class</td> <td>68</td> </tr> <tr> <td>Consultation, validation tests</td> <td>8</td> </tr> <tr> <td>Self students studying</td> <td>90</td> </tr> <tr> <td><i>Summary:</i></td> <td>270</td> </tr> </tbody> </table> <p><i>Assessment of student knowledge:</i> Credit</p>		<i>Form of working</i>	<i>Discipline hours</i>	Lectures	42	Laboratory workshops	62	Practical class	68	Consultation, validation tests	8	Self students studying	90	<i>Summary:</i>	270
<i>Form of working</i>	<i>Discipline hours</i>														
Lectures	42														
Laboratory workshops	62														
Practical class	68														
Consultation, validation tests	8														
Self students studying	90														
<i>Summary:</i>	270														

Tab. 5: Example of the description of modules

Organisation of students' learning experience

The content of the programme, its structure, methods of teaching and learning are integrated into the curriculum. The curriculum regulates the objectives, expected outcomes, content, conditions and technologies for the implementation of the educational process. At Sechenov University, the concept of teaching and learning follows an approach of active participation of students in the educational process. Therefore, in addition to traditional teaching methods and techniques (lectures, practical studies, seminars, workshops, individual work, including individual tasks), the programme uses innovative role-playing games, case studies, seminars with discussion elements, work in small groups, round tables, work with electronic databases, preparation of essays and presentations taking into account the principles of the students' interests, etc. Besides, simulation models are used to convey practical skills.

All teaching and learning methods shall encourage students to take an independent, proactive and creative approach to work with educational materials, and also to form

the ability to solve non-standard professional tasks in a competent manner. This approach shall not only expand professional knowledge, but also develop practical skills that will bring the education closer to practice in later professional routine.

Problem-based statement method is also one of the preferred teaching methods where seminar lessons turn into an interactive communication between students and instructor over the solution procedure of problems that may even be individually contributed by students.

The programme offers students the option of choosing electives and even a specialist direction. Already in the 1st year, students should get acquainted with possible directions of their future professional activity by the module "Introduction to the Specialty. Movement of Medicines". This module shall provide in-depth understanding of the various areas of work in the field of pharmacy so that students become familiar with the work of pharmacy organisations, pharmaceutical industries, drug development laboratories, chemical and toxicological laboratories and other areas, such as academia.

Starting from the 3rd semester (2nd year) by choosing one of the directions, the student may gain additional knowledge by studying electives in the chosen direction. Offered directions are:

- pharmaceutical manufacturing/development and quality control;
- pharmacy/social pharmacy;
- health authorities/leadership and management;
- surveillance in healthcare/quality control;
- chemical toxicology laboratory;
- manufacturing of immunobiological products,
- etc.

Besides, the language of instruction can be chosen.

If students wish to change the direction of the elective disciplines, they may choose an elective from another direction. It is even possible to switch from English to Russian.

The list of elective disciplines is annually revised. In addition, students have the opportunity to choose scientific and practical directions. Students may choose to carry out research, based on their individual scientific interests and in accordance with their professional experience: Some students are already employed in the health sector and have the opportunity to engage in practical and research work at their workplaces in accordance with the chosen direction.

Assessment

Programme structure

The expert panel assesses the curriculum as well structured and logical. The subjects and modules are well defined and cover the relevant content and competences to meet the programme's defined objectives and learning outcomes. In the experts' opinion, the course arrangement generally considers the competencies and skills later required in the professional occupation in different areas. The main focus is still on the Russian pharmaceutical system and Russian labour market. It is advised to include more content from the foreign students' countries of origin, e.g. as electives. This also would attract more international students and support the exchange.

The study programme is well structured and allows students to follow a well-arranged schedule in their studies. The students' workload in the programme is high but – according to the students the expert group could talk to – it is manageable.

Mechanisms for providing knowledge and application of scientific methods

Different types of teaching methods are adopted in accordance to the intended learning outcomes. The experts appreciate the obvious flexibility, the high proportion of self-study and the consultation offers by the staff as well as remote classroom lectures and other e-learning formats. Students' own projects from the beginning of study result in the acquisition of profound knowledge and work skills.

Organisation of students' learning experience

According to its tradition, Sechenov University considers excellent teaching on the basis of excellent research the university's main strength. The experts note that this is well met in the study programme "Pharmacy (Specialist)": By learning in small groups and in direct contact to teachers the university makes great efforts to enhance a successful learning experience of their students.

The experts especially appreciate the self-image of the teachers to be more learning supporters than instructors. Appropriate student-centred teaching and learning methods are used, students are also encouraged to take an active role in creating the learning process. According to the interviews, even the diversity of students and their needs is taken into account.

Students expressed their satisfaction with the study environment in the programme and at Sechenov University as a whole. They strongly appreciate the good learning atmosphere and a staff always open to consultation and help.

Areas for improvement

Considering the diversity of students and of future market needs, number and variety of electives could be improved.

The university could also consider more flexibility by the possibility of individual extension of the duration of study.

Also more practice work done by individual students and going beyond group presentation would be desirable, esp. combined with new media techniques that are nowadays important in pharmaceutical research and industry.

Recommendations

The international orientation of the curriculum should be further developed by making not only the Russian Pharmacopoeia a topic but also considering the different international pharmacopoeial texts that are mandatory in the students home countries.

3.3 Student assessment

The third criterion focuses on the organisation of student assessments. The expert panel has to evaluate how the assessment of intended learning outcomes is organised and whether the amount and requirements of assessments are adequate. They also have to decide whether the requirements of the thesis reflect the level of the degree.

Overall, it is assessed whether the assessment criteria are transparent and used in a consistent way. It is also evaluated if the staff undertaking assessments is adequately

qualified. Last not least it should be verified if examination regulations exist and that they provide clear and fair regulations for student absence, illness and other mitigating conditions.

Current status

Organisation of assessment

The procedure for assessing students' knowledge at Sechenov University follows the university-wide "Regulations on Formative and Interim Assessment". Sechenov University has formed a fund of several assessment tools for the continuous, progress, interim and final (state) knowledge assessment. The main types of students' knowledge assessment are:

- computer testing;
- practical skills assessment – assessment of the competencies' level;
- interview on case problems, control questions;
- practice certification.

The fund of assessment tools also contains:

- the list of competencies with the stages of their development in the course of the study programme;
- a description of the indicators and assessment criteria for the competencies at various stages of their formation;
- a description of assessment scales;
- typical assessment tasks or other materials necessary for the assessment of knowledge, skills, and work experience;
- teaching aids that define the knowledge assessment procedures and skills that characterise the stages of the formation of competencies.

From the very beginning, students become introduced to the different types of assessment for their appropriate preparation.

During the entire study period, knowledge and skills are regularly assessed: In classes, the assessment on the classes' topic is carried out by testing or by control questions. When finishing the study of a discipline's section, a progress check is done including the knowledge control of the whole set of finished classes.

Assessment of knowledge during the interim certification (examination period) for one discipline is carried out once in the form of a test and/or examination at the end of the discipline (module). Certification is provided for academic training and work experience internship. The final (state) certification is carried out as a state examination at the end of mastering the entire programme.

All assessment is done in accordance with both the calendar schedule and the individual course schedules. All information on forthcoming assessments are placed on information boards prior to the beginning of the semester. Students have the opportunity to prepare in advance for all types of knowledge assessment. Weekly consultations for students are held in all departments in accordance with the schedule of regular consultations. Information about the date and time of the test/examination is available on the student's personal account in the university information system.

Amount and requirements of assessments

The total number of elements of interim assessment for one semester does not exceed ten; for the entire period of mastering of the study programme in accordance with the curriculum it includes:

- 38 tests (plus one for elective course);
- 21 examinations;
- 8 practice certifications.

At the end of the 1st semester, students have to submit to 8 tests (with a “passed/not passed” grade), at the end of the 2nd semester they have to do 4 tests (with a “passed/not passed” grade). The 3rd semester ends with three tests (with a “passed/not passed” grade) and 5 examinations (assessed using a 5-point grading scale), the 4th semester ends with two tests (with a “passed/not passed” grade), 4 examinations (assessed using a 5-point grading scale), and one practice certification (assessed using a 5-point grading scale).

At the end of the 5th semester students have to pass 4 tests (with a “passed/not passed” grade) and one examination (assessed using a 5-point grading scale), at the end of the 6th semester there are two tests (with a “passed/not passed” grade), 4 examinations (assessed using a 5-point grading scale), and one practice certification (assessed using a 5-point grading scale), at the end of the 7th semester there are 4 plus one (elective course) tests (with a “passed/not passed” grade) and one examination (assessed using a 5-point grading scale). The 8th semester ends with 4 tests (with a “passed/not passed” grade), 4 examinations (assessed using a 5-point grading scale) and one practice certification (assessed using a 5-point grading scale). At the end of the 9th semester there are 7 tests to pass (with a “passed/not passed” grade), two examinations (assessed using a 5-point grading scale) and one practice certification (assessed using a 5-point grading scale). Finally, the 10th semester ends with 4 practice certifications (assessed using a 5-point grading scale). At the end of the whole programme, the final (state) assessment has to be submitted to, including interdisciplinary (inter-module) case problems (cases).

All knowledge assessment is organised in accordance with the “Regulations on Continuous Assessment of Academic Progress and Interim Certification” within the time limits established by the schedule plan, according to the timetable known to students in advance.

Continuous and progress knowledge check is carried out in classrooms. The examination/interim certification test is also held in specially designated premises.

Interim certification is carried out both as an oral interview for examination tasks (questions, case problems), and as a centralised computer examination.

Assessment of practical skills is carried out in the departments in specially equipped simulation rooms (“laboratories”, “working spaces”, “pharmacy trading room”, etc.). Supervision over practical work and its assessment is carried out by faculty members also at the places of practice (e.g., pharmacies, pharmaceutical enterprises).

The final qualification of “Pharmacy (Specialist)” is awarded on the basis of the completed study programme and the results of the final certification, supervised by a state examination commission. The results of assessments of knowledge in the disciplines (modules) and programme practices are specified in the diploma supplement.

Requirements of the final assessment

The final form of assessment of students' knowledge is the state final examination, regulated by the "Regulations on State Assessment" approved by the Academic Council of Sechenov University. In accordance with the Federal State Education Standards, the final state certification in "Pharmacy (Specialist)" is held as an interview. The interview is conducted on interdisciplinary case problems, including the check of knowledge of the person undergoing the certification in the main principal subjects, such as pharmaceutical technology, pharmaceutical chemistry, pharmacognosy, management and organisation of pharmacy, biotechnology, pharmaceutical information. The candidate's individual examination card is considered during the interview.

To conduct the state final certification, a state examination commission (4 members and one chair) is formed out of faculty members of the institute (academic teaching staff of departments, including foreign academic staff) and representatives of employers from pharmaceutical industry (up to 50%).

Assessment criteria

Assessment criteria are posted on the official website of the university, along with the schedule of examinations and local regulations of the university. Prior to every examination (test), it is mandatory to inform the students about the assessment criteria.

The following assessment criteria are used in disciplines:

- Testing the discipline for "passed": the result "passed" is delivered when there are at least 60% of correct answers;
- Testing the discipline for "admission to the examination": the result "admitted" is delivered when there are at least 60% of correct answers.

The examination interview is assessed on the basis of answers to the questions using a 5-point grading scale. A positive result is at least 3 points. The following assessment criteria are used:

- "excellent" mark (5 points) is given when the student demonstrates profound knowledge and skills on the subject matter in question and tasks, provided that the educational material is presented independently, consistently, correctly, and appropriately formulated;
- "good" mark (4 points) is given when a student demonstrates knowledge and skills on the subject matter in question and tasks subject to independent, consistent, correct and appropriately formulated presentation of educational material with some inaccuracies and minor errors;
- "satisfactory" mark (3 points) is given when a student demonstrates knowledge and skills on the subject matter in question and tasks with inaccuracies and some significant errors.

Assessment qualification of staff

The development of assessment qualification is part of the continuous personnel training which is under responsibility of the Department of Theory and Technology of Education at the university (see also criterion 5).

Examination regulations and regulations for student absence, illness, etc.

All regulation documents are published at the university website. For valid reasons it is possible to postpone or repeat parts of the examination.

Assessment

Organisation of assessment

The assessment system is highly diversified. The expert panel appreciates the organisation and transparency of assessment in the specialist programme but a more sensitive handling of personal student data should be considered (since names and grades of students are openly published on the university website during the assessment process).

Amount and requirements of assessments

The amount and requirements of assessments with regard to the intended learning outcomes are adequate. They are fully in-line with international practice.

A wide range of assessment methods and tasks is used.

Requirements of the final assessment

The final assessment reflects the qualification level that is awarded. The experts appreciate that representatives from both academia and professional practice are members of the state examination commission.

Assessment criteria

The assessment criteria are exactly defined, and they are transparent for students as well as for staff. The students the experts talked with were well aware of the assessment criteria, they know what is expected and they know whom to contact in the case of problems or questions. The student-centred learning approach provides nearly optimal preparation to assessments.

Assessment qualification of staff

According to the interviews made during the site visit, the staff undertaking the assessments is adequately qualified.

Examination regulations and regulations for student absence, illness, etc.

All examination regulations are available online. There are clear and objective regulations for student absence, illness and other mitigating circumstances.

Recommendations

None.

3.4 Organisation of the study programme

Furthermore, the implementation of the programme has to be evaluated. The expert panel assess the appropriateness of entry qualifications and the regulations for the recognition of qualifications (i.e. Lisbon Convention). It has to be reviewed whether the

organisation of the study process allows the programme to be carried out in such a way that the intended learning outcomes will be achieved and whether the organisation of the study process also takes the diversity of students and their needs into account. It is evaluated how the implementation of the programme is managed (roles and responsibilities) and even whether the workload of the programme is adequate with respect to the necessity to reach the intended learning outcomes in the scheduled time frame. The organisation of the student life cycle (i.e. all (organisational) relationships between the student and the institution from enrolment to graduation) is also part of this criterion. The experts check whether the care services and student advisory services are suitable and – in case of a cooperation with internal and external partners – how the cooperation is organised.

Current status

Entry qualifications

All information about the admission procedure is published on the university website at <https://www.sechenov.ru/eng/applicants/>.⁸ The admission process, including the organisation of entrance examinations, competition and admission to the programme, is carried out by the University Admission Committee.

Applicants have to submit a written formal application, along with a set of other documents according to the regulations. They may also provide information about individual achievements that could be taken into account as bonuses.

Persons with proven secondary general, secondary vocational or higher education may apply to the programme. Specific issues for foreign citizens' admission are regulated.

Foreign citizens have to pass tests in chemistry and Russian, Russian citizens additionally in biology.

Table 6 shows the admission dates of the English-medium programmes for the academic year 2019/2020 at Sechenov University.

PREPARATORY DEPARTMENT	SPECIALIST'S DEGREE (General Medicine, Dentistry, Pharmacy)	MASTER'S DEGREE	PhD PROGRAMMES
<i>Intensive for 18/19:</i> Dec 04, 2018 - Jan 25, 2019 (training starts on February 01, 2019)	<i>1st intake:</i> Jun 20 - Aug 26, 2019 (training starts on September 01, 2019) Tests: till August 28, 2019	Jun 20 - Jul 31, 2019 (training starts on September 01, 2019) The last day for tests: August 05, 2019	<i>1st intake:</i> Dec 04, 2018 - Feb 28, 2019 Tests: Mar 01 - Mar 12, 2019
<i>Regular for 19/20:</i> ..., 2019 (training starts on October 01, 2019)	<i>2nd intake:</i> Oct 01 - Oct 23, 2019 (training starts on November 01, 2019) Tests: till October 28, 2019		<i>2nd intake:</i> Jun 20 - Aug 02, 2019 Tests: Jul 01 - Aug 06, 2019 (training starts on September 01, 2019)

Tab. 6: Admission dates at Sechenov University 2019 (Source: <https://www.sechenov.ru/eng/education-study/admission/>, accessed 15 July 2019)

⁸ Accessed 15 July 2019

Regulations for the recognition of qualifications

Results of previous education are not recognized or taken into account, apart from the general university entrance qualification. All applicants have to pass entrance examinations.

Organisation of the study process

The study process is split by study periods: academic years, semesters (2 semesters per 1 academic year), and duration of modules. The academic year starts on 1 September. As already explained above, the study programme is organised in disciplines (modules) and the knowledge is submitted in the form of lectures, seminars, practical and laboratory classes (see also criterion 2). Each discipline includes parts of self-guided work and self-studies, basically observed and guided by dedicated faculty members. Before the beginning of studies, the university forms a schedule of classes in accordance with the curriculum and calendar plan. Students learn by lectures, seminars, practical trainings, and self-studies. Distance learning and e-learning elements are also implemented.

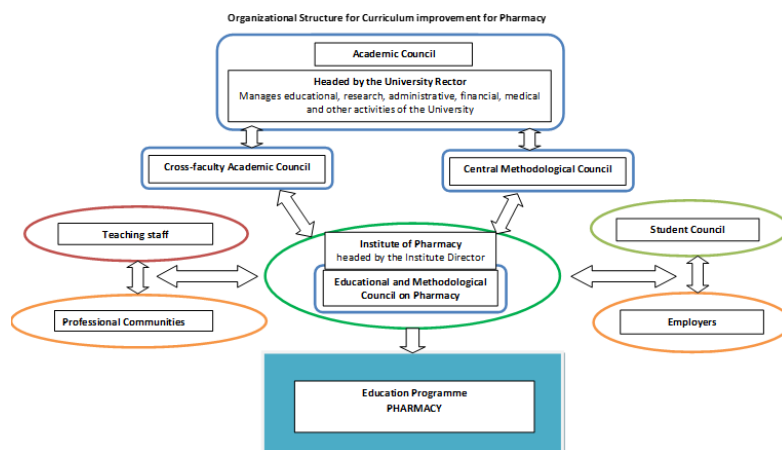
The group size is determined by ensuring an optimal ratio of the number of students to one instructor and cannot exceed 25 students. The amount of lectures and seminars is specified in the specialist programme during its regular (re-)approval procedure (see criterion 1).

The connection between classes is regulated by the schedule of classes and the schedule plan. Homework is appointed by the faculty member and is provided by the curriculum as the time for self-guided work.

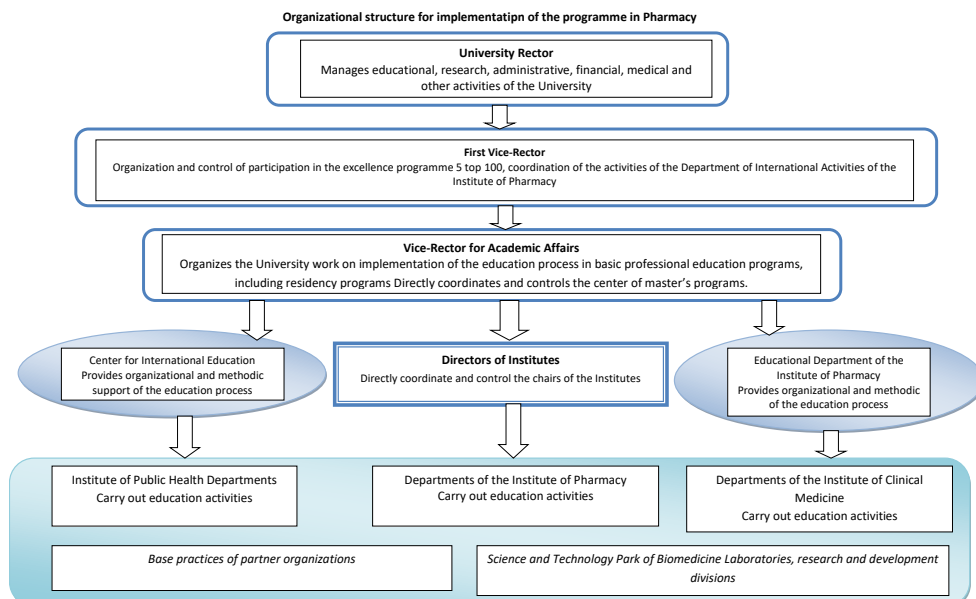
Management of the study programme

The management of the study programme "Pharmacy (Specialist)" is carried out by the Academic Council of the University and the Educational and Methodological Council of the Institute of Pharmacy which approves the working programmes of disciplines, decides on the structure of the study programme, the curriculum, the introduction of new disciplines. It also deals with other issues regarding the content of the study programme.

Table 7 and 8 illustrate the organisational structure of programme management, the responsibilities and the structure of interaction between the involved units.



Tab. 7: Interaction in curriculum improvement (Source: Self-report of the university)



Tab. 8: Responsibilities in the implantation of the programme (Source: Self-report of the university)

The Educational Department of the Institute of Pharmacy and the Center for International Education have the main administrative responsibility. They organise the learning process with the help of the relevant departments of faculties and institutes, they monitor student performance and help students with academic and other issues. At department level, the educational process is organised by the head of the department, an employee of the department in charge of the programme, and the teaching staff.

The university has developed and implemented a policy that ensures the participation of student representatives and relevant participation in the design, management, and evaluation of the study programme, as well as in other issues related to students.

Sechenov University annually reconsiders the study programme according to recent developments in science and technology (see criterion 1). Any changes or updates have to be approved by the Academic Council. The programme cooperates – upon agreements – with external organisations as well as with internal university departments which provide bases for practical studies and research activities for the programme students.

Student workload

As already mentioned, total credit value of the specialist programme is 300 credits, fixed by the Federal State Education Standard. The education process – including student holidays – lasts 5 years.

The annual workload of the programme therefore equals to 60 credits with 30 credits per semester. The university guarantees that the academic load is performable for students within a schedule plan, where the daily load is indicated. Students' workload is maximum 54 hours per week which includes all types of in-class work, self-studies and extracurricular study work

The total amount of break from classes period in the academic year is 7-10 weeks, including at least two weeks in the winter period.

Organisation of the student life cycle

The student life cycle begins directly after enrolment. International students are cared of by the Center for International Education responsible for international students' orientation, education, and stay in Russia. The centre includes a Migration Office which deals with the registration of migration and the extension of the period of stay, the design of invitations for foreign students to enter the Russian Federation for training.

The university has departments, organisations, and structures that organise the life of students during the study and their extracurricular time. In addition to a wide range of educational buildings, the university provides its own modern facilities for the comprehensive development of students, such as indoor and outdoor sports complexes, a botanical garden, a fitness centre by the sea, and much more.

The university has also developed and implemented a policy that ensures the participation of student representatives in solving various issues relating to students, namely the Student Council of Sechenov University (established in 2010). The council is represented in many commissions and academic councils of the university. The opinion of the Student Council is taken into account when adopting local regulatory legal acts.

Student organisations of Sechenov University, their activities and the scope of each of them are published on the official website of the University (<https://www.sechenov.ru>) in the section "For Learners" (<https://www.sechenov.ru/learners/>)⁹ and in printed information sources.

Graduates are later invited to join the University Alumni Association, forming and maintaining interpersonal and corporate relationships that promote self-development and promotion of graduates and consolidate the fame of their alma mater.

Student support system

The Center for International Education is responsible for providing assistance for the students in migration, social, cultural, entertainment, sports issues, and is also responsible for additional professional and research activities. It consists of several subdivisions that deal with official invitations and migration registration of students, residential issues, social and legal support for students, social education of students, public relations, involvement of talented students in internal and external research projects, medical care and insurance, participation in artistic, cultural, musical, dance, sports, charity, and volunteer clubs and competitions. Besides, there is a system of academic counselling for students. It offers support for social, financial, and personal needs. Sufficient resources are available to support and advise students. Confidentiality is also ensured.

Students receive academic counselling based on academic achievements monitoring with vocational guidance and planning. They can also attend additional advisory classes in the disciplines of the specialty at the departments of the university.

Cooperation with internal and external partners

The study programme is regularly reviewed by leading organisations of the local pharmaceutical industry since the implementation and further development of the programme is carried out in cooperation with a number of internal and external partners (see criterion 1). The cooperation with internal partners – mainly the several university divisions – is aimed at ensuring the highest level of teaching. For instance, anatomy

⁹ Accessed 15 July 2019

and physiology is taught by academic staff of the departments of the Institute of Clinical Medicine: the Department of Human Anatomy and the Department of Normal Physiology, the oldest departments of the university teaching all medical specialties. The teaching of hygiene and microbiology is carried out in the Department of Microbiology, Virology and Immunology of the Institute of Public Health. Fundamentals of Bioinformatics and Drug Design are taught by the Department of Information and Internet Technologies. At the same time, for example, students who want to study bioinformatics in the area of pharmaceutical research more in-depth have the opportunity to carry out scientific research in the bioinformatics laboratory under the guidance of laboratory scientists. A student can choose a laboratory practically in any area of his/her interest and receive in-depth knowledge, skills, and research experience under the guidance of a high-profile specialist, including foreign experts.

For the work experience internship, students are assigned to specially selected bases of practices – partner organizations of the university, which have an activity profile corresponding to the types of practices provided in the education programme. Industry leaders are selected as the bases of practices: large pharmacy organisations, modern foreign and Russian manufacturing enterprises, a botanical garden, pharmacies in clinics. During their practice internships, students attend modern foreign and Russian production sites of such enterprises as Roche-Moscow, CJSC; Servier, LLC; KRKA-RUS, LLC; BIOCAD, CJSC; FSUE “Moscow Endocrine Plant”; AstraZeneca Industries, LLC; R-PHARM, JSC; pharmacies Rigla, LLC, SIA International, JSC, “Planeta Zdorovya”, LLC, and also work at laboratories of manufacturing facilities and research centres.

Assessment

Entry qualifications

In the view of the experts, the entry qualification and regulations are appropriate and transparent. All information can be found on the university website, both in Russian and in English.

Regulations for the recognition of qualifications

Prior qualifications are not recognized. Being no formal part of the Bologna process, the university is not obliged to develop a strategy of recognition. The experts think that such a strategy would strengthen the university on the long term, even in international competition.

Organisation of the study process and management of the study programme

According to the expert panel, the study process is well organised and clear. The roles, obligations and responsibilities in the management are clearly defined and appropriately structured, people involved the experts could talk to are highly motivated and professional. Besides, the university has established methods and means for student involvement, both in giving feedback and in decision-making.

Student workload

Having heard the students, the expert panel believes that the workload of the programmes is manageable. The university seems to observe the students' workload regularly.

Organisation of the student life cycle

The experts note that there is excellent communication between students and teachers: learning groups are small, there seem to be lots of formal as well as informal contacts between teachers and students. The students the expert panel could interview were very positive regarding good organisation and atmosphere of the study process. Physically handicapped persons seem to have more difficulties than the experts would have expected. The university should make this a topic for the future.

Student support system

According to the interviews during the site visit, university care services and student advisory services are highly developed and both known and favoured by the students.

Cooperation with external and internal partners

The internal cooperation with the other departments involved seems to function well. Besides, a lot of cooperation practice with external partners, mostly from pharmaceutical industry, exists. Cooperation with research institutes could also be aimed at. Thanks to this cooperation, students receive various opportunities, from internships to later starting points for their professional career.

Recommendations

If the university wants to address further students from abroad a practice of recognition of academic and professional experiences should be implemented in the admission procedure.

The accessibility for physically handicapped persons should be further improved.

3.5 Resources

Central to the criterion “resources” is whether there are appropriate resource endowment and deployment in the involved faculties. The experts evaluate the existence of sustainable funding and financial management, whether the staff is adequately qualified and sufficient to ensure the intended learning outcomes and which strategies and processes for staff recruiting and staff development are used. The experts examine if the amount and quality of facilities and equipment (library, laboratories, teaching rooms, IT equipment, etc.) allow the provision of the programme and if the resources are adequate to reach the programme’s objectives.

Current status

Financial management and funding

The study programme “Pharmacy” is financed with federal budget resources from the government together with tuition fees which are established and annually approved by

the University Academic Council. Currently, the number of funded study places is limited to 60 places. For non-funded study places students have to pay tuition fees of altogether 1,219,786 RUB (about 17,200 EUR) for five years.¹⁰

Staff

The programme implementation is supervised by both the Director of the Institute of Pharmacy and the Head of the Educational Department of the Institute.

27 units of the university – 26 departments and one laboratory – are involved in the programme. 612 staff members, including 127 professors, 231 associate professors, 137 senior lecturers, 13 staff members and 99 assistants and 4 research fellows are accordingly engaged. There are 402 employees with a post-graduate degree: 106 employees have doctoral degrees, and 294 employees are candidates of sciences, 2 PhD. 204 staff members have academic titles: 72 employees have the title of professor; 132 employees are associate professors.

Teaching academic staff consists of 78 full-time and 46 part-time employees, altogether 124 people. All staff members participate in research activities in their fields of knowledge and link it with teaching. Besides, further qualification and improvement of teaching methods play an important role at Sechenov University: Personnel training is conducted at the Department of Theory and Technology of Education in two programmes with several workshops and seminars: the “Higher School Staff Member” programme which is mandatory for all university staff members, and the programme “Psychological and Pedagogical Foundations of Higher Medical and Pharmaceutical Education” which is mandatory for all university professors every 3 years. In 2017, the university also introduced performance-based contracts of employment for faculty members. Thus, in accordance with the criteria of efficiency, incentive payments were established for each staff member at the end of the semester and annual incentive payments based on the work of the department.

Last not least, Sechenov University also encourages faculty members, esp. the teaching staff to regularly participate in scientific conferences (nationally and abroad) and to apply for short-term internships at foreign universities.

Staff recruiting process

Vacancies are regularly published by the university. The recruitment follows a standardized selection process based on previously defined and published criteria, such as university degree, teaching experience, own research, publications.

Facilities

The lecture halls are located in various university buildings (physics building, chemistry building, anatomy building, building of the Institute of Pharmacy, and others). All are equipped with multimedia complexes.

Laboratory and practical classes and workshops are held in classrooms and laboratories. Several laboratories offer individual workplaces for students, equipped with microscopes and equipment that allows own microscopic preparations, bacteriological and immunological research projects. The technological laboratory is specially equipped to

¹⁰ This amount is spread over the years: 403,000 RUB (about 5,700 EUR) in the first and second year, 340,000 RUB (about 4,800 EUR) in the third year, 243,306 RUB (about 3,450 EUR) in the fourth year and 233,480 RUB (about 3,300 EUR) in the fifth year.

give students the opportunity of realistic practical work in the development, manufacturing and quality control of drugs. Disciplines involving utilization of special computer software are held in computer classes.

Some of the seminar rooms are open for individual study. Self-study is supported by the university library, several computer labs and training aids rooms, and electronic educational resources. To support the latter, a Unified Educational Portal (UEP) was implemented.¹¹ Based on the platform moodle it offers information and educational modules of any format, e.g. academic and methodological complexes of disciplines and specialties, multimedia and interactive manuals, educational films, etc. This unified information and educational portal is open for all students and staff of the university.

Sechenov University has its own Botanical Garden, on a total area of 4.95 hectares and with an educational laboratory building inside. Classes and practice in botany and pharmacognosy are held there.

Furthermore, the university provides to students several facilities for their professional and personal development such as sports facilities, scientific associations, etc.

Library

Two university libraries¹² contain together nearly four million copies (more than 1.5 million items) of national and international medical literature (including research works, translations, theses, abstracts, deposit manuscripts, clinical guidelines, etc.). This includes 216,856 issues in foreign languages (175,014 titles) and periodicals including 1,168,383 issues (3,031 titles).

Besides, the library maintains an electronic database of medical data and health called "Russian Medicine" which covers more than 80 % of all published and unpublished materials in the field. The database is fully accessible via Internet. The library also provides access to Scopus, SciVal (Elsevier) and Web of Science databases.

The library section consists of about 5,000 square metres of archives, reading rooms with over 400 places and modern IT service for users. There are several work places for students in the library. During the whole period of study every student is also granted individual unlimited access to the e-library systems which can be connected from anywhere in the world via Internet access, both inside and outside the educational institution.

Assessment

Financial management and funding

Since the university is directly financed by the government there seem to be no financial difficulties. In the view of the experts, the financial management is professional. The financial endowment of the study programme is appropriate. The annual adjustment of the amount of study places happens under consideration of costs.

¹¹ <http://do.sechenov.ru>, accessed 15 July 2019

¹² Central Scientific Medical Library and Fundamental Educational Library

Staff and staff recruiting process

The staff involved in the study programmes is, according to the expert panel, appropriate to provide high quality education to students and to develop research. The administrative staff is very professional. Altogether, the experts appreciated the dynamic and motivated staff members, both academic and administrative.

According to the experts, number and qualification of academic staff (full-time and part-time) are adequate to ensure the intended learning outcomes.

The search and tenure procedures of the university seem to the expert panel to fulfil academic standards and ensure the selection of academics based on an academic decision. The experts appreciate the opportunities provided to staff to improve their teaching skills. They explicitly appreciate the mandatory character of teaching skill development.

Facilities

The facilities of the university are appropriate for sustaining the teaching and the research activities. The equipment the experts saw during the site visit was all modern and up-to-date.

The technical equipment, which the experts saw during the site visit, allows a high quality of teaching.

The experts noticed that access to the internet via eduroam is not available on the whole campus. This is a limitation for foreign exchange not only for international guests who may have difficulties with internet access on Moscow campus but also for own travelling scientists who may experience the same abroad.

Library

The library provides access to relevant literature and journals. The experts appreciate the high level of digitalisation in the library and the bright and open atmosphere. However, the actual number of work places in the library appears to be not sufficient. The number of sockets (for laptops, mobiles, etc.) gave the same impression.

Areas for improvement

The staff recruitment procedure happens without involvement of students. In the view of the experts there would be no harm in trying to involve the student union (which is active already at Sechenov University) so that students' views and learning experiences could become considered, too.

Recommendations

The university should establish more work places for students with tables and sockets across the whole campus. A possibility to dedicate lecture rooms on the campus for student work space should also be considered. Overall, in the library and in other buildings, the number of work spaces should be at least 13%, measured by the number of students.¹³

¹³ According to a study by the German HIS Hochschul-Informationen-System GmbH, universities should provide work place for students in an amount of altogether 13% based on the number of students, 10%

Access possibility to internet via eduroam should be established, both for international guests and for own personnel.

3.6 Quality assurance

The criterion “quality assurance” focuses on the internal and external mechanisms used by the institution to monitor and improve the quality of the study programme: how the study programme is designed and implemented and how its improvement is organised.

The experts evaluate the existing quality assurance concept of the programme and what kind of quality assurance processes and instruments are implemented, which indicators are used for monitoring the achievement of the programme’s objectives and how the institution and the persons responsible for the programme collect, analyse and use relevant information about their activities. Moreover, the experts examine whether quality assurance is used regularly, systematically and effectively for quality enhancement and if quality feedback loops are closed. It is also evaluated how stakeholders (students, teachers, administration, employers) are involved in quality assurance and whether relevant programme information for students and prospective students is provided.

Current status

Quality assurance concept of Sechenov University

Since 2007, the university has repeatedly passed external quality audit processes. In August 2018 the university management system’s ISO certification¹⁴ (ISO 9001:2015) was reconfirmed.

The concept itself follows a procedural approach, taking into account the individual assessment of knowledge and achievements during the entire period of study.

The university’s full educational portfolio is connected closely to research and based on leading international practice. To ensure high quality of its study programmes the university has built up a hierarchy of responsible persons (“management hierarchy”):

- each university department has a quality representative. They report regularly to the head of the department and to the First Vice Rector – Vice Rector for Innovation and International Affairs who is the university’s quality management representative;
- the quality management representative reports directly to the university management;
- the university management (consisting of the Rector, the Academic Council and the Vice-Rectors) take all reports on quality into account and decide about necessary changings.

at the library, 3% across the whole campus. For MSMU, this would mean about 3,000 places in the libraries and additional 900 places across the campus. (Cf. Vogel / Woisch: Orte des Selbststudiums. HIS Forum Hochschule 7/2013, online at http://www.dzhw.eu/pdf/pub_fh/fh-201307.pdf, accessed on 15 July 2019.)

¹⁴ ISO 9001:2015 with regard to education services, research activities, research services, research and development.

During the year, internal (March-April, November-December) and unscheduled internal audits of the departments of the university are planned.

Table 9 illustrates the management hierarchy.

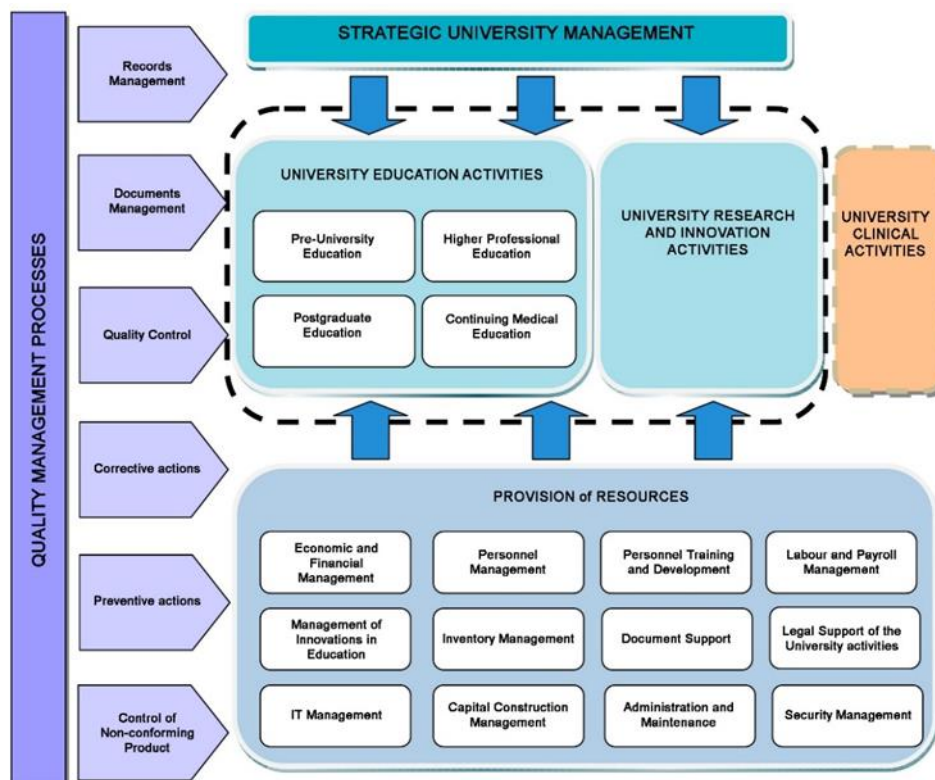


Table 9: Role of quality management in the university system (Source: Sechenov University)

The basic principles of this system are regulated in the following official documents:

- "University Policy",
- "Objectives in the Area of Quality of Educational, Research, Innovation and Medical Activities of the University for 2017-2018",
- "Indicators of the Quality of Processes in 2017-2019",
- "Activity Plan to Achieve the Objectives in the Area of Quality of Educational, Research, Innovation and Medical Activities of the University",
- "University Quality Guide".

All these documents are in Russian.

According to the self-assessment report, the university has set following quality objectives:

- provision of the full cycle of educational programmes for the most talented students from around the world to lead in creation and implementation of effective multi-disciplinary models and methodologies of pharmaceutical education;
- meeting the needs of the students' intellectual, cultural and moral development by means of higher, additional professional education in the chosen field of activity;

- constant improvement of the methodological, methodical, material, technical and information bases of the university;
- continuous improvement of the competence of the university staff, representing a close-knit team of highly qualified experts;
- training of qualified pharmaceutical and academic and teaching staff for near and far-abroad countries, taking into account best international experience.

Quality assurance processes and instruments

All university institutions are inspired not only to improve continuously the competence, qualifications and training of students but also to improve constantly the methodological, methodical, material, technical and information bases of the university itself. According to this target, all university departments prepare annual progress reports on their improvement. These reports are reviewed during the extended rector's meeting on the analysis of the quality management system of the university.

The students' learning progress is electronically recorded and under constant observation by the head of the study programme. The monitoring system allows to obtain objective data on all dynamics of educational processes, etc. This annually updated data creates an information basis for the improvement and adjustment of educational, research and medical diagnostic activities of the university.

On course level, each course is evaluated by the students at the end of semester in the form of a survey.

The university monitors students' success as one element in judging the appropriateness of teaching methods. The rector annually holds discussion meetings open to all students on their study experiences and their proposals for improvement.

In 2016, a multi-level independent monitoring system for assessing the quality of education was implemented at Sechenov University, including:

- systems for assessing individual learning results;
- systems for assessing the academic teaching staff;
- monitoring of educational achievements across the university.

Implementation of objectivity principles allows the assessment of mastering level of each discipline by every student, every student group, even staff members, and every department as a whole according to a defined set of performance criteria.

Tools for assessing the students' knowledge include:

- current academic progress;
- interim certification;
- final state examination (FSE).

Centralized testing (CT) is a mandatory stage of interim certification for 1,980 disciplines included in the curricula of the specialist, bachelor programme, secondary vocational education and residency training at the university. One of the key points of the CT is the regular monitoring of test task pools to maintain their relevance and control the quality of the several evaluation tools.

The monitoring system of scientific research allows obtaining objective data on the dynamics of educational processes, etc. These annually updated data are aimed at creating an information base for improving and adjusting the educational, research and development activities of the university.

In accordance with the requirements of paragraph 8.2.1. of ISO Quality Guidelines, as well as in accordance with the annual order of the Rector "On studying the requirements and customer satisfaction with educational, medical, and research activity of the

university”, the Institute of Pharmacy regularly (at least once every six months) conducts surveys among students (pupils, students, medical residents, graduate students, students of further vocational education programmes), staff members, researchers and employees of the Institute of Pharmacy and external consumers (employers, representatives of professional community). The survey content includes: educational path; career path; evaluation of the programme infrastructure (management, website); evaluation of the study programme.

These surveys are prepared and conducted by the Quality Management Department in conjunction with the Institute of Social Sciences.

Quality indicators

The first indicator reflected is – beside the individual success of students – the satisfaction of students with the educational process. A survey conducted in 2018 showed that the majority of students surveyed are satisfied with the quality of educational services provided by the university (35.5% are “completely satisfied”, and 51.5% are “rather satisfied.” The ratio of “not satisfied” students in the survey is 2.6%.

Over the past two years, the number of students at Sechenov University who have chosen “rather satisfied” variant has increased by 27.2%, while the number of “not satisfied” students has decreased significantly (by 20.5%). Along with this, there is a positive trend in reducing the number of respondents who gave a negative assessment of the quality of the educational process at the university.

Based on the assessment of the quality of educational services, the necessary changes are made to update and adjust the relevant sections of education programmes. All changes have to be approved by the university management.

Involvement of stakeholders

The university tries to involve all participants of the education process into QMS, as well as external experts and employers by means of surveys (questioning), independent expert evaluation of the study programme, and inclusion of employers’ representatives in the commission of the final (state) examination.

Assessment

Quality assurance concept of Sechenov University

The expert panel observed a rigorous quality assurance system on the basis of formalised processes. The quality assurance concept seems to be appropriate to assure that the learning outcomes of the study programme are achieved and students graduate. Since the drop-out rate is low the system seems to work.

The experts note that the university quality system is actually documented mostly in Russian language. The experts appreciate that Sechenov has already started the translation of these documents. Especially in view of the intended increasing number of foreign students and study programmes conducted in English language, all relevant documents should be translated into English. This would also strengthen the internationality of the study programme and help targeting enrolment of new students from abroad.

According to the experts, effectiveness, regularity and systematic character of the quality assurance system cannot be denied. The monitoring system is highly sophisticated and obviously has effects on improving the quality of teaching. The experts appreciate the regular meetings between the rector and the students.

Nevertheless, the system appears as basically top-down and hierarchy oriented where participative elements are just in their beginning. The experts would welcome to further develop those participative approach that would bring different views together to improve the system as a whole.

Quality assurance processes and instruments

The university monitors its processes by collecting and analysing data widely and constantly. The anonymity of collected data seems to be assured.

Quality indicators

The regularly conducted surveys illustrate great improvement the university has undergone in the last years.

Involvement of stakeholders

Stakeholders (students, teachers, administration, employers) are involved in quality assurance. The experts appreciate that external partners are part of the quality assurance processes.

Areas for improvement

Surveys' results could be more discussed widely than just reported. Feedback discussions with students at the end of each course and each semester would give students a clear signal that their opinions are taken into consideration seriously. To guarantee a free and collegial atmosphere these discussions should explicitly have no consequences either on teacher contracts or students' assessment rates.

Recommendations

The experts encourage the university in strengthening participative elements within the quality management process which has already started. Especially, students' involvement into quality assurance processes should be further improved.

All relevant documents about the programme quality management should be translated into English and published online.

4. Final Assessment

Overall assessment

The expert panel confirm that the study programme "Pharmacy (Specialist)" shows a clearly defined profile. The programme considers both scientific and societal national and international practice and is also regularly updated and revised.

The objectives as well as the learning outcomes are described in detail, all concise, clear and aligned with content, and they correspond to the level of awarded qualification.

During their site visit the experts observed the university's strong mission as a centre of excellence in medical and pharmaceutical education and research which is promoted by all representatives the experts could talk with.

At Sechenov University, there is a stable connection between teaching and research: scientific methods in theory and practice are provided on a high level, research based training can be observed.

International standards in teaching and in pharmaceutical research are met. The experts appreciate the interdisciplinary approach of the study programme. Modules taught in English language contribute to the international state-of-art. The experts appreciate that students can decide for English or Russian as teaching language as well as they can choose between different scientific focuses.

The qualification of the teaching staff seems to be adequate in terms of the profile and the objectives of the programme. The experts note that teaching is carried out by dynamic and motivated lecturers highly experienced in teaching. Some of the teachers have international working and/or educational experience. Obviously, a variety of teaching methods is used. The experts appreciate that the university offers various opportunities to teaching staff for improving their teaching methods and has invented a system of incentives for staff.

The experts especially appreciate the involvement of external (and international) partners from pharmaceutical industries as this has not only a positive effect on the content and ways of teaching but also increases later employment opportunities for both students or graduates and for staff – esp. the latter to collect new professional and also international experience.

The curriculum and the study process are clearly structured and appropriate to reach the intended learning outcomes.

Students are offered several support services. The roles and responsibilities in the management are clearly and appropriately structured, staff involved are highly motivated and professional. The experts especially appreciate the self-image of the teachers to be more learning supporters than instructors. Students expressed their satisfaction with the study environment in the programme and at Sechenov University as a whole. They strongly appreciate the good learning atmosphere and that the staff is always open to consultation and help.

All examination regulations are available online. There are clear and objective regulations for student absence, illness and other mitigating circumstances.

The expert panel appreciates the organisation and transparency of assessment in the programme. A wide range of assessment tasks is used, defined assessment criteria exist and are transparent for students as well as for staff. In the view of the experts, the amount and requirements of assessments with regard to the intended learning outcomes are appropriate. They are fully in-line with international practice. According to the experts, the staff undertaking the assessments is also adequately qualified.

The experts note that there is excellent communication between students and teachers: learning groups are small, there seem to be many formal as well as in-formal contacts between teachers and students.

Since the university is financed directly by the Russian government there seem to be no financial difficulties. In the view of the experts, financial management is professional.

The facilities of the university are appropriate for sustaining sufficient teaching and research activities. The technical equipment, which the experts saw during the site visit, allows high quality of teaching. The library provides access to relevant literature and journals. The experts appreciate the high level of digitalisation in the library and the bright and open atmosphere. However, the actual number of work places in the library appears to be too little (as on campus at all).

The expert panel observed a rigorous quality assurance system on the basis of formalised processes. The quality assurance concept seems to be appropriate to assure that the learning outcomes of the study programme are achieved and students graduate. Since the drop-out rate is low the system seems to work adequately.

In the view of the experts, effectiveness, regularity and systematic character of the quality assurance system cannot be denied. The university monitor system is highly sophisticated and obviously has effects on improving the quality of teaching.

Nevertheless, the quality system appears as basically top-down and hierarchy oriented where participative elements are just in their beginning. The experts appreciate the regular meetings between the rector and the students. The experts would welcome to further develop those participative approaches that would bring more different views together to improve the system as a whole.

Overall, the expert panel assesses the study programme “Pharmacy (Specialist)” as solid. The academic standards of the study programme are met.

Results of the assessment

Assessment grades

No	Assessment criteria	Assessment
1	Programme profile	A
2	Curriculum	A
3	Student assessment	A
4	Organisation of the study programme	A
5	Resources	A
6	Quality assurance	A

Assessment levels

Level	Assessment	Description
A	Passed.	The programme fulfils or exceeds all criteria. All activities are in line with the profile and objectives of the programme and provided at a high academic level.
B	Passed subject to conditions	The programme does not fulfil some relevant criteria. However, the institution should be able to remedy the shortcomings within nine months after the assessment.

C	Suspension of the accreditation procedure	The programme does not fulfil relevant criteria, but it is likely, that it will be able to remedy the shortcomings within 18 months after the assessment. The HEI may apply for a resumption of the accreditation procedure.
D	Failed	The programme does not fulfil relevant criteria, and is not expected to be able to meet all assessment criteria within 18 months' time.

5. Statement of the university to assessment report



SECHENOV UNIVERSITY

Federal State Autonomous Educational Institution
of Higher Education I.M. Sechenov
First Moscow State Medical University
of the Ministry of Healthcare of the Russian Federation

(FSAEI HE I.M. Sechenov First MSMU MOH Russia
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2.2 АВГ 2019

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на № _____ от _____

evalag
(Evaluationsagentur Baden-Württemberg)
M7, 9a-10, 68161 Mannheim, Germany

Re: international programme accreditation "Pharmacy (Specialist)".

Herewith, on behalf of the Sechenov University management and staff I would like to thank the expert panel and the Accreditation Commission of evalag for the great work that has been done and will further be done within the accreditation of the University's education programme in Pharmacy.

The expert panel's report despite the high evaluation of the programme within each criterion provides for the valuable external view. Positive feedbacks confirm that the work on organization and development of the programme, educational process, infrastructure, quality control, etc. is on the right way and done properly.

Recommendations substantially reflect areas for improvement from the international perspective which is in line with the University's aim for undergoing international accreditation procedures. It is important to say that some areas for improvement had been also discussed at internal University meetings before the site visit took place. Some of them have been improved already, i.e. the R11 recommendation regarding the quality management documents to be translated and published online. They can now be found via the link: <https://www.sechenov.ru/eng/regulatory-documents/>.

As for now, all the recommendations are studied carefully and will be taken into account within the further programme development.

In the end, let me kindly extend to the evalag Accreditation Commission and staff members, as well as the expert panel members our deepest respect and appreciation.

Sincerely,

Prof. Tatiana Litvinova
Vice-rector for Academic Affairs
Sechenov University



6. Accreditation recommendation of the expert panel to the evalag Accreditation Commission

According to the expert panel, the study programme “Pharmacy (Specialist)” meets **evalag**’s criteria for international programme accreditation. Therefore, the team recommends it for accreditation and recommends awarding the **evalag** label for international programme accreditation.

The team recommends the Sechenov University to consider and implement the following conditions (C) and recommendations (R) in this report to further improve the study programme.

Programme profile

- R 1** Students should be further encouraged to improve their English writing abilities.
- R 2** Research based teaching should be further developed.
- R 3** The possibilities for international work experiences of staff should be further increased beyond short-term stays. Teachers should also be encouraged by incentives for international exchange.

Curriculum

- R 4** The international orientation of the curriculum should be further developed by making not only the Russian Pharmacopoeia a topic but also considering the different international pharmacopoeial texts that are mandatory in the students’ home countries.

Student assessment

No recommendations.

Organisation of the study programme

- R 5** If the university wants to address further students from abroad a practice of recognition of academic and professional experiences should be implemented in the admission procedure.
- R 6** The accessibility for physically handicapped persons should be further improved.

Resources

- R 7** The university should establish more work places for students with tables and sockets across the whole campus.
- R 8** A possibility to dedicate lecture rooms on the campus for student work rooms should be considered.
- R 9** Access possibility to internet via eduroam should be established, both for international guests and for own personnel.

Quality assurance

- R 10** The experts encourage the university in strengthening participative elements within the quality management process which has already started. Especially, students' involvement into quality assurance processes should be further improved.
- R 11** All relevant documents about the programme quality management should be translated into English and published online.

7. Accreditation decision of the evalag Accreditation Commission

At its meeting on 10 September 2019, the **evalag** Accreditation Commission decides unanimously to accredit the study programme "Pharmacy (Specialist)" at Sechenov University with the recommendations (R) mentioned in Chapter 6.

Annex

Annex 1: Site visit schedule

Wednesday 22nd of May – Arrival of expert panel and preparations

18:00	Internal meeting of expert panel, review of site visit plan
20:00	Dinner at the Hotel

Thursday 23rd of May – First day of site visit

08:00-9:00	Internal meeting of expert panel Going from the Hotel to the University Campus
09:00-09:30	Welcoming by representatives of Sechenov University
09:30-10:00	Meeting with Vice-Rector for Academic Affairs
10:00-11:00	Meeting with Coordinator of study programme Heads of departments involved in the programme
11:00-12:30	Internal meeting of expert panel
12:30-14:00	Lunch at University Cafe
14:00-15:30	Meeting with faculty members (teachers)
15:30-17:00	Campus Tour: Laboratories, Library
17:00-18:30	Internal meeting of expert panel: review of first day
19:00	Dinner with representatives of the MSMU

Friday 24th of May – Second day of site visit

09:00-10:30	Meeting with students and alumni
10:30-11:00	Meeting with Quality Management
11:00-11:45	Meeting with Student Administration and Support Services
11:45-12:15	Meeting with employers
12:15-13:15	Lunch at University Cafe
13:15-14:30	Internal meeting of expert panel
14:30-15:00	Closing meeting with representatives of the MSMU and of the study programme
15:00	Departure of expert panel

Annex 2: Profile of expert panel members

Prof. Dr. Angelika Vollmar



Angelika Vollmar holds the Chair of Pharmaceutical Biology at the Ludwig-Maximilians-University of Munich and is also Dean of the Faculty of Chemistry and Pharmacy. The Vollmar Lab aims at deciphering the therapeutical potential of natural compounds focussing on cancer.

Prof. Vollmar has obtained her PhD in Pharmaceutical Biology from the Ludwig-Maximilians-University of Munich. With a fellowship from the German Research Foundation (DFG) she then carried out a postdoctoral training at University of California, Los Angeles, USA before she re-

turned to Munich for professorship.

Being engaged in a number of scientific organisations, Prof. Vollmar has been member of the "Senate of the German Research Foundation (DFG)" and speaker of the Scientific Advisory Board of the "Robert-Bosch-Stiftung". She is member of the advisory board of the "Deutsche Krebshilfe" and the Fraunhofer Institute (IME). Besides, she shows a burning commitment in promoting the careers of young researchers being involved in a variety of mentoring programmes.

Prof. Dr. Andreas Link



Andreas Link is Vice-President of the German Pharmaceutical Society (DPhG) and Full Professor of Pharmaceutical/Medicinal Chemistry at University of Greifswald. Before, he was Associate Professor of Pharmaceutical Chemistry at the Philipps University in Marburg.

Prof. Link studied in Hamburg where he also obtained his PhD. His research work is focussed on chemical active ingredient synthesis and analysis which led him so far to international working groups in Belgium and the USA.

In 2015 he was appointed to the Scientific Advisory Board of the German Federal Ministry of Defence for Sanitary and Public Health which advises the Minister of Defence on questions relating to the health care system of the German Armed Forces.

Dr. Alexandra Steckel



Alexandra Steckel studied pharmacy at the State Chemical Pharmaceutical Academy in St. Petersburg, Russia. She extended the study at Christian-Albrechts-University Kiel, Germany, and was awarded the MSc degree of the faculty in 2006. She finished her PhD thesis in Pharmaceutical Technology in 2009 at the Institute for Pharmaceutical Technology and Biotechnology of the Christian-Albrechts-University of Kiel, Germany, under supervision of Prof. Dr. Dr. B. W. Müller.

In 2010 Dr. Steckel started her industrial career at Losan Pharma GmbH, Germany, as Technology and Business Development Manager. From 2012 to 2015 she was Sales Manager for Pharmaceutical Excipients and Contract Development Services at Evonik Industries AG, Germany.

Since January 2015 she is Business Development Manager at Alfred E. Tiefenbacher GmbH & Co. KG, Germany.

Liubov Krant



Liubov Krant had already studied medicine for two semesters at Sechenov University when she left for Germany in 2013.

After College Preparatory Courses (Studienkolleg) and College Admissions Assessment Test (Feststellungsprüfung) in Berlin in 2014 she began her studies in pharmacy at Christian-Albrechts-University of Kiel. There she was engaged in several student organisations and in the student body of the faculty.

Since April 2017 Liubov gets scholarship of the Friedrich-Naumann-Foundation for freedom. In 2018 she was awarded with DAAD-Prize for outstanding achievements of foreign students at Kiel University. Soon after the assessment project, Liubov graduated. She currently works at medac GmbH in Hamburg.