

STANDARD 6.

LEARNING RESOURCES AND STUDENT SUPPORT

6.2.1 The financial policy of the University is aimed on maintaining and improving the quality of educational programs for training specialists with higher and postgraduate education. The University budget is formed taking into account all expenses and ensures high-quality implementation of all educational programs. The sufficiency of funding for the implementation of educational programs is confirmed by the clear profit received by the University and distributed in agreement with the Supervisory Board to improve the material base and social support of students.

6.2.2. Data on financial and material security are given in the following table 6.1:

Table 6.1 – Data on financial and material security

Means for ensuring the educational process within the framework of the EP			Investment funds for purchases of large equipment (financial resources)
Funds for payment of labor staff (average salary by category: faculty members, Administrative and managerial staff, training and support staff)	Material resources: classrooms, special laboratories, instrumentation, etc.	Investment funds: what is planned for purchase	
249 806 t.	1 134 557 t.	3 620 147 t.	-

6.2.3. For the implementation of educational programs, the ENU Registrar's OFFICE organizes, manages and controls the accounting of students ' credits, maintains the entire history of educational achievements in accordance with the requirements of regulatory documents of the Ministry of education and science of the Republic of Kazakhstan. The ENU library provides the EDUCATIONAL process, research and educational work with literature and other documents, as well as information about achievements in various professional fields. The library Fund consists of educational and professional literature, and periodicals

For the effective development of EP, the University provides students with advisors and other consultants who should help organize educational work with students, self-management and involvement of students in the social and creative life of the University. The team of advisors advises students on issues related to the

choice of elective subjects and teachers, provides methodological assistance to doctoral students.

According to the regulations on external academic mobility, approved by the rector's order of February 28, 2020 [28], applicants for participation in the academic mobility program can be ENU students, doctoral students studying from 1 to 4 semesters, both on a paid basis and at the expense of international programs (at the time of academic mobility). Applicants of the program can apply for the academic mobility program in a group of educational programs (in agreement with the graduating Department of fundamental Mathematics). Applicants must have a GPA of at least 2.67 for self-financing, at least 2.67 for receiving financial support from the national budget. Applicants must be proficient in a foreign language of study at the host University at least level B2, which is provided with a supporting certificate or provide international certificates (IELTS, TOEFL), with the exception of international programs in which the rules and terms of enrollment in the academic mobility program are regulated by a foreign partner University. Within the framework of academic mobility, Applicants can study at foreign partner universities with which there are cooperation agreements, or at any foreign Universities included in the TOP-700 rating in the QS World University Rankings. Information about academic mobility programmes is published on the University website and/or AIS "PLATONUS" and shall be communicated to Candidates by coordinators for international cooperation of faculty of Mechanics and Mathematics, Department of fundamental Mathematics. The applicant for participation in the academic mobility program provides the necessary folder of documents in accordance with Supplement 1 to the Department of International Relations within the established time frame. Agreements for training/Leaming Agreement are developed in three copies (one copy is provided to the student, one copy is provided by the Applicant to the partner University, one is brought with signatures to the University's Department of International Relations).

6.2.4 One of the factors necessary to ensure successful, high-quality training of students in EP is a well-developed material and technical base.

Doctoral students are trained at the faculty of Mechanics and Mathematics, located in building no.3 ENU. The total area is 1,220.29 sq. m. 26 classrooms are involved in the training process, mainly for 20-30 seats. Useful training area meets the current sanitary standards, qualification requirements for the activities of educational organizations. Fire safety requirements comply with National All-Union Standard of RK. The faculty has computer classes No. 222, No. 225, and No. 306. Computer classes are equipped with modern computers with Internet connection, interactive whiteboard, projection screen. All computers have AutoCAD And MatLab programs installed. Doctoral students also have the opportunity to work in specialized offices No. 304, No. 305 of the Eurasian Mathematical Institute on the basis of ENU. To conduct the discipline "Spectral functions of complete stable theories" or to prepare for classes during teaching practice, use the office on the methodology of teaching mathematics No. 224. The office is equipped with an interactive whiteboard and a projection screen.

Specialized equipped laboratories are not required for the implementation of the EP.

6.2.5 In the process of implementing EP 8D05401-Mathematics, doctoral students are provided with the necessary teaching materials. In the AIS Platonus system, students can use their username and password to extract EP, Work Curricula, syllabuses, Educational and methodical complex, view the progress log, schedule of classes and exams. Students have access to educational and methodical literature on paper and electronic media in the Otrar library, the database of which is regularly updated.

For students, there are 4 subscriptions: educational subscription, scientific literature subscription, foreign literature subscription and subscription of belles-lettres, and 7 reading rooms with 700 seats: electronic resources hall, Philology hall, social and economic literature hall, universal literature hall, periodicals hall (open access for all specialties), reference and bibliographic publications hall (open access – thesis, dissertation, and papers, the collections of materials of international conferences, seminars, symposia, abstract journals, Chronicles book chamber of the RK, bibliographical AIDS), the hall of rare books and manuscripts (5033 rare books and manuscripts 7657 Turkic, Sogdian, ancient Chinese, ancient Arabic, Farsi, Khakass and other languages), an electronic catalogue [29].

The Fund of educational literature used in the process of preparing doctoral students for this EP is 5200 units. The availability of educational, methodological and scientific literature for 1 student in the specialty is 141 units. The availability of electronic and magnetic media sources for PhD students is 45%.

The library Fund is updated in accordance with the state standard of the Republic of Kazakhstan 5.03.010-2006 "Information resources and library Fund".

Analyzing the shortcomings of resources, we can say that there is not enough literature in the state language for elective modules. In this direction, the graduate Department is working. Thus, in the reporting period was published in the state language "Ospanov K. N. Сингулярлы дифференциалдық теңдеулер", "Iskakova S. A., Karatayev S. D. Ықтималдықтар теориясы бойынша есептер жинағы ", "Iskakova A. S., B. S. Norimov " Математикалық есептердің Matlab жүйесіндегі шешімі", "Rakhimzhanova S. K., Karatayev S. D. Ықтималдықтар теориясы және математикалық статистика пәнінен оқу-әдістемелік құрал", "Kussainova L. K. 'Жалпыланған функциялар теориясының элементтері", "Alday M., K. Myrzalieva.R. Жай дифференциалдық теңдеулерге кіріспе", "Oinarov R. O., K. R. Myrsataev Жартылай сызықтық дифференциалдық теңдеулердің тербелімділігі", "Syzdykova Z. N. Математикалық физика теңдеулерінің есептер жинағы", "Iskakova A. S., B. S. Norimov MATLAB жүйесінде ықтималдықтар теориясының есептер шешімі", "Iskakova A. S., A. B. Tleulesova " Ықтималдықтар теориясы пәнінен есептер жинағы ".

In turn, the University publishes educational and methodological literature in the state language at its own expense as a motivation and incentive.

6.2.6 Today, the information portfolio of the scientific library is represented by 20 Electronic library system/Database: 3 domestic, 7 foreign, 7 Russian and 3 Databases on The scientific Portal of the Ministry of education and science

(Scopus, Science Direct \Elsevier\, Web of Science \Glarivate Analytics\). Every year the availability of educational literature on electronic media in the library's collection increases. For the reporting period, this figure is 34083 units. The part of electronic educational publications is 40% of the subjects studied. Over the past five years, 22025 electronic documents have been received, including 3310 in the state language and 1847 in English. Special attention is paid to the development of electronic collections of works of scientists of ENU. To date, the Fund contains - 124 units of educational electronic publications developed by the Teaching staff and digitized books by the Teaching staff - 3475 titles. The proposed resources on electronic media meet their qualification requirements.

In the hall of electronic resources of the library "Otyrar" there are 45 computers connected to Internet resources. Doctoral students use the scientific and library stock of the library equipped with traditional and electronic catalogs, news bulletins, Internet resources, etc. There is an electronic resource room (educational and laboratory building), which is equipped with 25 computers connected to the Internet.

The availability of electronic textbooks and the electronic reading room Fund is achieved through full reflection in the electronic catalog, by placing electronic publications on the ENU media Library website <http://emedia.enu.kz> (currently, there are 1,979 units of CD/DVD editions available).

Access to the electronic catalog is possible for all categories of users from any PC connected to the local network of the University.

Students can access an electronic library of domestic authors with more than 2000 textbooks and manuals in Kazakh, Russian and English. Doctoral students and teachers, having registered in the library and received a username/ password, can study and use educational literature using a mobile phone both on the territory of the University and via remote access.

Doctoral students have access via secure WiFi access to the Internet, an electronic catalog www.catalog.enu.kz and full-text databases <http://catalog.enu.kz:55555/?dbid=LOCAL-EBOOKS>. Students have access to the catalogs of the Republican interuniversity electronic library (RIEL) www.rmeb.kz, Kazakh National electronic library (KazNEB) www.kazneb.kz, Adilet databases www.adilet.zan.kz and to global databases and resources: "SpringerLink" www.rd.springer.com, "Thomson Reuters" www.wokinfo.com, "ELSEVIER"

The screenshot displays the 'Электронная библиотека' (Electronic Library) website. At the top, there is a blue header with the library's name and logo. Below the header, there are navigation links: 'О системе', 'Обратная связь', 'Помощь', and 'Статистика'. The main content area is divided into several sections:

- Выбор БД (Database Selection):** A dropdown menu showing 'Каталог книг' (Book Catalog).
- Тип поиска (Search Type):** A list of search types: 'Простой' (Simple), 'Расширенный' (Advanced), 'По словарям' (By dictionary), 'Сквозной' (Full-text), 'Новые книги' (New books), 'Новые диссертации' (New dissertations), 'Новые авторефераты' (New abstracts), and 'Отчеты' (Reports).
- Поиск (Search):** A section with various search criteria:
 - Знак (Sign):** A dropdown menu with 'И' (And) selected.
 - Поле поиска (Search Field):** A dropdown menu with 'Авторы' (Authors) selected.
 - Условие поиска (Search Condition):** A dropdown menu with 'Начинается с' (Starts with) selected.
 - Тема поиска (Search Topic):** A dropdown menu with 'Начинается с' (Starts with) selected.
- Год издания (Year of publication):** A section with 'с' (from) and 'по' (to) fields.
- Электронная версия (Electronic version):** A checkbox labeled 'Искать в найденном' (Search in found).
- Тема поиска (Search Topic):** A section with checkboxes for 'Книги' (Books), 'Журналы' (Journals), 'Статьи' (Articles), 'Диссертации' (Dissertations), 'Авторефераты' (Abstracts), 'Учебник' (Textbook), 'учебное пособие' (Textbook), and 'учебно-методическое издание' (Textbook-methodical edition).

At the bottom of the page, there is a 'Найти' (Find) button and a 'Справка' (Help) link.

www.sciencedirect.com, "Polpredsom" www.polpred.com, "Russian state library" www.rsl.ru, www.nabrk.kz, Nazarbayev University libraries www.library.nu.edu.kz, Republican scientific and pedagogical libraries and libraries of higher education institutions of Kazakhstan www.rmeb.kz as well as foreign University libraries (Lomonosov Moscow state University www.msu.kz, Chelyabinsk state Academy of culture and arts www.chgaki.ru, St. Kliment Ohridski Sofia University www.uni-sofia.bg and others).

The electronic catalog contains thematic databases: "Works of the faculty of the L. N. Gumilyov ENU", "L. N. Gumilyov ENU on the Pages of the press", "Current problems of higher education", "Dissertations defended at the L. N. Gumilyov ENU", "New arrivals", etc.

Access is only available on the University's territory (when using the University's IP address). Doctoral students and teaching staff can use the electronic Fund of the scientific library "full-Text electronic resources" located at the following address via the University's local network <http://library.enu.kz>.

Available electronic publications are provided by reputable international organizations of Electronic information resources and exclusive representatives of Electronic library systems, who actively cooperate with leading Universities in Europe and the West, Russia and other CIS countries, and with leading Universities in Kazakhstan.

In addition to full-text multi-disciplinary databases, the ENU teaching staff and TEACHING staff have access to scientometric databases:

1. Scopus is one of the largest databases of abstracts and citations from peer-reviewed scientific literature. It contains more than 68 million entries from 23 thousand volumes, 100 thousand conferences and 150 thousand books, more than 5 thousand publishers from 105 countries. Also includes more than 8,000 articles in print, 4,000 active goldopenaccess Journals. The resource is updated daily and covers 40 languages. Profiles of scientists are automatically generated.

2. ScienceDirect is the world's leading information platform for a full – text database of books and journals. It covers 24 main scientific disciplines. More than 14.5 million publications from 2,500 scientific journals published by Elsevier. The archive dates from 1823. Pre-printed articles (ArticlesinPress) are available.

3. Web of Science (WOS) – an authoritative polythematic reference-bibliographic and scientometric database of Clarivate Analytics. WOS provides a searchable list of over 13,000 journals and 148,000 conference materials in the natural, social, human and art fields.

4. Springer is one of the world's largest publishers of scientific content in various formats. It contains more than 3068 journals, including more than 550 open access journals, as well as more than 180,000 scientific books.

6.2.7 The main directions of the scientific library are high – quality acquisition of the Fund in accordance with the profile of the University. Create an information environment for students, enable them to use information resources, automate the library process, and improve the electronic library.

A unified system of library and information services, an electronic catalog.

In the structure of the scientific library of 6 departments: Department of acquisition and processing of documents related to the division of cataloging and classification of documents, the [Department of automation of library-information processes](#), information and bibliographic Department of scientific-methodical Department, Department of service of readers.

For library users, there are 4 subscriptions and 7 reading rooms with 350 seats. The effectiveness of using the library Fund is revealed through high-quality library and information services for users, the number of book issues, and the demand for them by readers.

The library regularly replenishes 4 catalogues: the traditional (alphabetical, systematic, service) and electronic catalog, as well as the "Card-catalogue of book availability of the educational process" and the electronic "Card-catalogue of articles in periodicals»

The total Fund of the library for the academic year 2019-2020 is 1,526,877 copies, including 515,134 copies in the Kazakh language. (34% of the total Fund).

From them:

- Educational and methodical literature-936076 copies. (61 % of the total Fund), including in the Kazakh language – 344270 copies.

- Scientific literature – 400725 copies. (26 % of the total Fund), including in the Kazakh language - 115269 copies.

- Additional literature – 190076 (12 % of the total Fund), including in the Kazakh language – 55595 copies.

- The Fund of periodicals is 18413 copies(1 % of the total Fund), including 9045 copies in the Kazakh language.

- The number of copies for the cycle of General education subjects is 432,600 copies, including 118,200 copies in the Kazakh language.

- The number of copies for the cycle of basic disciplines is 738580; including 260834 copies in the Kazakh language.

- The number of copies for the cycle of specialized disciplines is 355700, including 136100 copies in the Kazakh language.

The book supply for the EP "8D05401-Mathematics" is 5200 copies. The availability of basic disciplines on paper and electronic media, as well as educational and scientific databases, the database of electronic scientific journals is 100%.

One of the most important indicators of effective use of library funding is the demand for purchased literature. According to the analysis of the effectiveness of the use of literature, the issue of educational literature – 480,502 copies, scientific literature – 374,297 copies, additional literature – 269890 copies, periodicals – 221027 copies.

The number of library visits is 425123 units.

The number of requests to the library of remote users – 456612 units.

Issued documents from the library funds – 803604 units.

Issued documents from network remote license resources–458535 units.

Special attention is paid to the formation of the library Fund for the purpose of information support of new academic disciplines introduced into the educational process of the University. The annual update rate is 3.5 % of the total Fund.

Thus, for the successful implementation of the Educational Program, the University and departments provide students with the necessary educational and material resources and provide consulting support to students.

6.2.8 Doctoral students have a computer class in their care (225). OP "8D05401-Math" is equipped with information resources in compliance with license requirements, resource base development and updating of the library Fund is made according to Standards of RK 5.03.010-2006 "Information resources and library Fund".

The list of equipment and equipment by Department is given in tables 6.2-6.4 (Supplement 20).

Table 6.2 – Classrooms of the faculty of Mechanics and Mathematics equipped with multimedia equipment

Auditorium	Interactive whiteboard, screen, projectors
Computer class No. 222	Hinged screen – 1 unit. “New Optoma” projector - 1 unit.
Laboratory of computational mechanics	Interactive whiteboard «White board» – 1 unit Projector «optoma» - 1 unit
Computer class № 225	Interactive whiteboard «Memory Specialist» - 1 unit Projector «optoma» - 1 unit.
Lecture room № 227	Projector «epson» - 1 unit.
The lecture room № 224	Interactive whiteboard «Traceboard» - 1 unit Projector «Optoma focus» – 1 unit.

Table 6.3 – Software of the Department of fundamental Mathematics»

№	Name	number of licenses	date of receipt
1	Wolfram Mathematica	5	19.12.2014
2	MATLAB	5	17.11.2017

Table 6.4 – Technical equipment of the Department of fundamental Mathematics»

№	Building	№ of auditorium	Number	Computer type	Year of purchase
1	Study building-3	306	15	Monoblock	2017
2	Study building-3	318	9	Personal computer	2017

3	Study building-3	318	8	Copiers and multipliers	2017
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6.2.9 The University has implemented a unified system of library and information services, purchases of educational and methodological literature at the request of the Department and faculty.

In General, the departments work closely with the scientific library on the acquisition of the most important and necessary educational literature in the form of applications and monitoring of purchased literature and appearing in the press. The University purchases various and informative literature on various profiles.

The contingent of the educational program "8D05401 – Mathematics" has the opportunity to use the funds of the scientific reading room "Otyrar". The hall has a capacity of 350 seats.

Doctoral students can use the database "full-Text electronic resources" of the University's scientific library located at <http://library.enu.kz/> via the University's local network. Since January 2012 connected to the electronic library located at <http://www.rmeb.kz/>.

For doctoral students and University teachers, educational and operational information is connected to the ENU portal and website. Departments and computer classes are equipped with the Internet and a local network of the University. The speed of the Internet connection is 100 Mbit per second.

The Department of science and innovation of The Gumilyov ENU, together with representatives of Thomson Reuters, Elsevier, Springer Nature, regularly conducts methodological and consulting training seminars, and web seminars on working with international databases. On the website enu.kz is access to international publications based on Thomson Reuters and Scopus.

6.2.10 The system of messages and assignments of tasks allows you to conduct internal correspondence and monitor the completion of tasks, participate in University-wide chat, forum, and teleconference.

The University operates the project" INFOKIOSK.ENU "- a single entry point to all information systems of the University (AIS" Platonus", AIS" Synergy", electronic library – ENULIB, corporate mail, the official website of the L. N. Gumilyov Eurasian National University).

This allows students to get their own accounts, have access to the personal account of the educational process management system "Platonus" (view current grades, transcript, registration for courses), and to the electronic document management system (Synergy), the electronic library – ENULIB, corporate mail

SWOT-анализ

S(strenght) – strengths (potentially positive internal factors)	W(wearness) – weaknesses (potential - negative internal factors)
The material and technical base and	Insufficient level of provision of the

the Fund of educational and methodical literature on electronic and magnetic media satisfy the requirements.	educational program with educational and methodical literature in the state language.
O – (opportunity) – favorable opportunities (potentially positive external factors)	T(Treat) - threats (potentially negative external factors)
ENU has the opportunity to produce educational literature in the state language.	The rapid increase in the price of materials.