

**MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF
KAZAKHSTAN**
Almaty University of Energy and Communications named after G.Daukeev



**DEVELOPMENT PLAN
EDUCATIONAL PROGRAMS
8D07101- "ELECTRIC POWER INDUSTRY"
FOR THE 2024-2027 ACADEMIC YEAR**

The level of the basic educational program

(Doctor's degree level 8)

Institute of Electric Power Engineering and Electrical Engineering IEE

2024

**EDUCATIONAL PROGRAM DEVELOPMENT PLAN 8D07101 "ELECTRIC POWER INDUSTRY"
FOR THE 2024-2027 ACADEMIC YEAR**

Areas of activity	Events	Responsible persons	Implementation mechanism	Risks	Indicators	Deadlines
1. Effective management of quality implementation Educational programs and improvement of educational process management mechanisms	1. Provision of OP with regulatory documents of the Ministry of Education and Science of the Republic of Kazakhstan: SSO, Municipal Unitary Enterprise, RUE with internal regulatory documents (Regulations, Instructions. (forms)	Head of the Department, university management	Formation of requests for the purchase of regulatory documents in the Ministry of Education and Science of the Republic of Kazakhstan, RUMS specialty in the UES Work with the Department of Analysis and Strategic Development, QMS Department	Non-compliance of the OP with the requirements of the State Educational Standard / professional standards	1. Annual updating of work programs of disciplines 2. Comparison of learning outcomes with state educational standards and professional standards	Annually
	2. Improving the OP structure	Head of the Department, university management, head of the OP	Updating the content of the specialty's educational program based on the generalization of modern domestic and international experience in training in this field, the requirements of employers and the demands of the labor market. Working with employers. Monitoring the achievement of OP results.		1 The number of disciplines updated during the year, % 2 Availability of the matrix "Learning outcomes – disciplines –SES" (yes/no)	Yes

	3. Development and improvement of the modular principle of OP formation.	Head of the Department, Head of the OP	Analysis of modern literary sources and the transition of Scopus and Web of Science publications.	The module does not correspond to the specific topic of the dissertation.	1 For practical and laboratory classes, % 2. % of students who completed the program, academic performance, graduation rate	
	4. Improvement of the Modular Educational Plan (updatability). Strengthening in-demand scientific, educational disciplines and promising areas	Head of the Department, Head of the OP	Increasing research laboratory programs, Matlab.	There are not enough modern modeling programs	1. Introduction of practice-oriented disciplines and case studies 2. Implementation of project-based learning	Annually
	5. Systematic improvement of educational and methodological support of the educational institution (UMKS, UMKD, etc.)	Head of the Department, university management, teaching staff	Updating the educational and methodological component, taking into account the needs of employers and the satisfaction of graduates. Advanced training and internships for teaching staff.	Insufficient qualifications of teachers	Percentage of teachers with a PC in the last 3 years	100%
	6. Development and implementation of a multilingual training program for OP specialists	Head of the Department.,	Preparation of programs, advanced training of teaching staff and the level of knowledge of foreign languages.	1. Students' lack of foreign language proficiency	1. The proportion of subjects taught in a foreign language	In groups with instruction

				at the entrance 2. Lack of educational materials in foreign languages	2. Provision of disciplines with educational and electronic resources	in English 100%
2. Training of competitive personnel	1. Improvement of educational standards based on the introduction of modern educational technologies into the educational process	Head of the Department, university management, head of the OP	1. Discussion of the issues of improving teaching methods at the methodological seminar of the department and faculty. 2. Virtual and digital laboratories; 3. Simulators of operating modes of electric power systems	1. Insufficient level of digital competencies of teaching staff; 2. Insufficient level of digital literacy of students;	% of the teaching staff is ready for digitalization.	
	2. Development and improvement of QED, taking into account the proposals of interested parties, primarily taking into account the opinion of employers	Head of the Department, university management, head of the OP	Annual updating of the disciplines of the Modular Educational Plan based on the proposals of employers.	Ignoring digitalization and new technical solutions in the electric power industry;	The predominance of theoretical material over practical skills;	
	3. Formation of a high-quality contingent of students	Head of the Department, university management	A career guidance plan, constant updating of the department's website page.	Low academic and	Class attendance;	100%

				professional motivation		
	4. Advanced training of teaching staff to organize work in new conditions	Head of the Department, university management	Professional development of teaching staff, participation in seminars of leading companies and at international conferences.	Insufficient qualifications of teachers	Доля преподавателей с ПК за последние 3 года	100%

<p>3. Improving the conditions for high-quality staffing of the OP</p>	<p>1. Training of own personnel through master's and doctoral studies in the Russian Academy of Sciences</p> <p>2. Increasing the proportion of settled teaching staff at the department</p>	<p>Head of the Department, university management</p>	<p>Updating the staff of the teaching staff of the department on the basis of continuity: - attracting the most competent graduates of the PhD program of the Russian Academy of Sciences, as well as specialists in the practical field of activity, to teaching and scientific activities.</p>	<p>Insufficient influx of young settled specialists.</p>	<p>1. The number of teaching staff in the doctoral programs of the Russian Academy of Sciences in the field of "Electric Power Industry". 2. Availability of individual scientific support plans for doctoral students. 3. The proportion of graduates of PhD degrees who continued to work at the department (%)</p>	
<p>4. Scientific research and innovation activities in the development of OP</p>	<p>1. Activation of scientific research at the department</p>	<p>Head of the department, teaching staff</p>	<p>Involvement of teaching staff and students in proactive, funded research on information security issues.</p>	<p>Insufficient involvement of students in research activities;</p>	<p>1. Number of students involved in research work; 2. The share of research papers (final qualifying papers) performed on the subject of scientific areas of the department;</p>	<p>Annually</p>
	<p>2. Participation in grant and contractual</p>	<p>Head of the</p>	<p>An increase in the number of works with an innovative focus with the</p>	<p>High academic workload of</p>	<p>1. Number of publications by</p>	<p>2024-2027</p>

	research and projects 3. Achievement of commercialization of the results of scientific research of the teaching staff of the department	department, teaching staff	filing of an application for an innovative patent and its application, the introduction of results into the educational process, publications in high-profile journals and foreign rating journals	teaching staff, reducing activity in research; insufficient level of publication activity.	teaching staff and students; 2. Participation in scientific conferences, competitions and grant projects;	
	4. Stimulating and motivating students to actively participate in scientific activities	Head of the department, teaching staff	Participation of students and undergraduates in national and international competitions on information security and information technologies. Involvement of students in the implementation of cathedral scientific research. An increase in the number of students enrolled in funded research.		3. Number of cooperation agreements with enterprises and scientific organizations;	2024-2027
	5. The growth of publications of teaching staff and doctoral students in journals with a non-zero impact factor	Head of the department, teaching staff	Preparation of scientific publications in journals with an impact factor, which are included in the international scientometric databases Tomson Reuters, Scopus.)	1. High number of publications with low citations 2. Low publication activity of doctoral students.	1. Number of publications the number of publications in journals with an impact factor that are included in the international scientometric databases Tomson	2024-2027

					Reuters, Scopus.)	
5. Development of the resource potential for the implementation of the OP	1. Purchase of office equipment, scientific equipment, and technical training tools. visual aids, etc. 2. Purchase of new laboratory equipment	Head of the Department, University Management, head of the OP	Annual procurement plans	1. Rising prices for equipment and supplies 2. Insufficient or reduced funding	1. The proportion of updated laboratory equipment, % 2. Execution of the procurement plan on time, %	2024-2027
	3. Development of information and educational resources of the department (website, portal, electronic CDs)	Head of the department, teaching staff	Activities for the development of information and educational resources of the University	Staff lack of competence, low motivation of teachers	% of students who actively use the portal	
	4. Opening of thematic laboratories from leading companies, manufacturers of innovative electrical equipment	Head of the Department, University Management, head of the OP	Conclusion of contracts, provision of audiences.	1. The difficulty of finding specialists to work with innovative software. 2. High initial investments : equipment, licenses, qualified personnel.	1. The number of events and participants. 2. Increase brand awareness and positive reputation of the company.	2024-2027