



SYLLABUS EDUCATIONAL DISCIPLINE



INTRODUCTION TO SPECIALTY

Code and specialty name	141 Electricity, Electrical Engineering and Electromechanics	Electricity, electrical engineering and electromechanics
The name of the educational and scientific program	Electrical Engineering	Automated Electromechanical Systems

THE TEACHER



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PhD, Associate Professor, Associate Professor of the Department of Automated Electromechanical Systems of NTU "KhPI". Experience - 25 years. Author of more than 40 scientific and educational works. Senior lecturer of courses: "Introduction to Specialty", "Electric drive handling machines", "Basic of electric drive" lecturer discipline "Theory of electric drive"

GENERAL INFORMATION ABOUT DISCIPLINE

Summary	Acquaintance with the history and achievements of the university, faculty and graduating department; Informing students about the organization of educational process at NTU "KhPI"; acquaintance with the possibilities of students of NTU "KhPI" in relation to the implementation of their own educational and research activities; provision of information on the possibility of students participating in international projects, organization of life, recreation, participation in sports and cultural events; acquaintance with the basic legal documents regulating the educational process at NTU "KhPI"; informing about social and legal protection of the student; formation of systematic ideas about the content and conditions of future professional activity among students; familiarization with job opportunities, the main requirements of potential employers; formation of students basic concepts and terms relating to specialty and specialty.
Purpose and goals	Formation of students basic concepts and terms relating to specialty and specialty.
Format	Practical classes, abstract, consultations. Semester control – credit
Learning outcomes	Professional formation of higher education applicant. Evolution of the nature and content of engineering activities
The total amount	Total amount 90 hours: Practical classes – 32 hours, Independent work –58 hours.
Prerequisites	Physics, Mathematics, Chemistry, Foreign Language
Teacher required	The student is obliged to attend all classes according to the schedule, not to be late. Adhere to ethics of behavior. Work with educational and supplementary literature, with literature on electronic media and on the Internet. In the absence of practical classes, an oral interview is held on the topic. In order to master the necessary quality of education in the discipline requires attendance and regular readiness for classes. Without the student's personal presence, the final control is not carried out.

STRUCTURE OF THE DISCIPLINE

	Practical classes 1	Higher vocational education in Ukraine and abroad. NTU "KhPI"	Independent work	Conducting a questionnaire (testing) from the specialization
	Practical classes 2	Organization of educational process at NTU "KhPI"		Registration of a single card of the reader. Acquisition of the algorithm for searching documents in alphabetical and systematic directories in the library reference-search system.
	Practical classes 3	Information and Library Resources of NTU "KhPI"		Registration of a single card of the reader. Acquisition of the algorithm for searching documents in alphabetical and systematic directories in the library reference-search system.
	Practical classes 4	Control measures. Organization and reporting in NTU "KhPI"		Introduction to the science-based bases of NTU "KhPI" Studying the procedure for obtaining copyright rights for objects of the library fund and open access sources Studying distribution of scores getting students, and skills and lessons assessment school (national and ects)
	Practical classes 5	Methodological recommendations on the students' work during study		Examine the requirements for the design of text documents given in the standard. Write from the standard the requirements for the following elements of paperwork: format and page margins, pagination; font, line spacing and alignment of the main text; numbering and design of titles of sections, subsections and paragraphs of documents; lists and lists in the text; tables in the text; graphic illustrations of the text (drawings) and signatures to them/ Rules for registration of elements of documents listed in the second paragraph of the task, submit as a table indicating the section numbers
	Practical classes 6	Social and legal protection of the student		Deal with the rules of medical registration. Eliminate student benefits. The schedule of the Student Palace and the Sports Palace
	Practical classes 7	Professional formation of higher education applicant. Evolution of the nature and content of engineering activities		Write a lecture on the topic "My presentation of the profession that I chose"
	Practical classes 8	The main questions in the specialty		Create a presentation on the topic "Problems, tasks and achievements of the electrotechnical industry of their country"

LITERATURE AND EDUCATIONAL MATERIALS

Basic Literature	<p>1. Ловейкін В.С., Ромасевич Ю.О., Човнюк Ю.В. Мехатроніка. Навчальний посібник - К., 2012. - 357 с. Режим доступу до ресурсу: https://elprivod.nmu.org.ua/files/mehatronics/1loveykin_v_s_romasevich_yu_o_chovnyuk_yu_v_mekhatronika.pdf</p> <p>2. B. J. Holmes Pascal Programming Thomson Learning; Revised edition (June 1 2003) 455 pages</p> <p>3. MATLAB and Simulink Tutorials [Електронний ресурс] – Режим доступу до ресурсу: https://www.mathworks.com/support/learn-with-matlab-tutorials.html</p> <p>4. Brian R. Hunt, Ronald L. Lipsman, Jonathan M. Rosenberg A Guide to MATLAB®: For Beginners and Experienced Users 3rd Edition Cambridge University Press; 3 edition (October 20, 2014) 330 pages</p> <p>5. Záda, V.: ROBOTIKA, Matematické aspekty analýzy a řízení. Učební text TUL, 2012. ISBN 978-80-7372-882-3.</p> <p>6. Angeles, J.: Fundamentals of Robotics Mechanical Systems. Springer-Verlag, New York, 2003</p> <p>7. Liu D., Wang L., Tan K. Ch. (Eds.). Design and Control of Intelligent Robotic Systems. Berlin, Springer-Verlag, 2009.</p>	Supplementary Literature	<p>1. Siciliano B., Khatib O. (Eds.). Handbook of Robotics. Berlin, Springer-Verlag, 2008.</p>
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LIST OF QUESTIONS FOR PREPARATION FOR THE CREDIT

Organization of educational process at NTU "KhPI", Normative base of the educational process of NTU "KhPI", Levels, degrees, standards and qualifications of higher education, curriculum, educational program, scientific mobility of students, internships and studies abroad, opportunities provided to students through the collaboration of NTU "KhPI" with other institutions (seminars, trainings, programs, etc.), the order of deduction, interruption of training, renewal and transfer of higher education applicants.

LIST OF EQUIPMENT

Personal electronic computer with Windows operating system and the following software: SciLab or Matlab.

Scale of assessment of knowledge and skills: national and ECTS

Score distribution for grading of graduate student	The amount of points for all types of educational activities	Rating of ECTS	Rating on a national scale	Scoring
	90-100	A	perfectly	
	82-89	B	good	
	74-81	C		
	64-73	D	satisfactorily	
	60-63	E		
	35-59	FX	unsatisfactory with the possibility of reassembly	
	0-34	F	unsatisfactorily with compulsory repeated study of discipline	

Points are calculated according to the following ratio:

- laboratory work: 15% of the semester grade;
- practical classes: 15% of the semester grade;
- independent work: 20% of the semester grade;
- Exam: 50% of the semester grade

ACADEMIC ETHICS NORMS

The student is guilty of violating the "Code of Ethics for Academic Relationships and Goodness of NTU" KhPI "": disciplinary discipline, commotion, kindness, honesty, indemnity. Conflict situations are governed by an agreement in senior groups with a clause, and if the conflict is not clear, the conflict is brought to the attention of the graduate students.

Syllabus in content is fully consistent with the work program of the discipline