

The syllabus of the discipline  
***Administration of Windows operating systems***

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<b>Field name</b>	<b>Detailed content, comments</b>
Name of the faculty	Faculty of Infocommunications
Level of higher education	First (bachelor's)
Code and name of the specialty	172 Telecommunications and radio engineering
Type and name of educational program	EPP "Information and Network Engineering"
Name of the discipline	Administration of Windows operating systems
Number of ECTS credits	3
Discipline structure (distribution by types and hours of study)	16 hours - 8 lectures, 20 hours - 5 laboratory classes, 6 hours - 3 consultations, 48 hours - homework, <b>type of control:</b> exam
Schedule (terms) of studying the discipline	2nd year, second semester
Prerequisites for studying the discipline	Previously, the disciplines "Fundamentals information and communication technologies ", "Programming"
Competences, knowledge, skills, understanding, which is acquired by the applicant in higher education in the learning process	Knowledge of the basics and features of the operating systems of the Windows family, the principles of the main tasks of administering the Windows OS. Ability to carry out basic work on setting up and administering desktop and server Windows operating systems, including ADDS.
The quality of the educational process	Educational-methodical and material-technical resource provision of the educational program, within the framework of which the discipline is studied, meets the licensing requirements and accreditation conditions of the educational activity of the university. Annual monitoring and revision of the curriculum of the discipline in accordance with the requirements and recommendations of the Ministry of Education and Science, state certification of acquired competencies of graduates, standards of cooperation with employers to ensure a competitive level of training. Adherence to the principles of academic integrity ( <a href="https://lib.nure.ua/plagiat">https://lib.nure.ua/plagiat</a> ). Contains public information on the requirements, competencies, level of education within the current educational program.

## **Description and content of the discipline**

The purpose of the discipline is to provide students with knowledge, skills and abilities to administer Windows operating systems. The discipline discusses general information about operating systems, virtualization at the OS level, the basics of Windows administration, including Active Directory Domain Services.

### **Content**

**Topic 1.** Introduction. Fundamentals of work and OS concepts

**Topic 2.** Virtualization and cloud services

Topic 3. Windows family

**Topic 4.** Basics of administration

**Topic 5.** Introduction to Windows Server 2016

**Topic 6.** Active Directory Basics

### **Learning outcomes of higher education**

As a result of studying the discipline, students must:

**KNOW:** classification of telecommunication and information networks, their elements, structures and structural properties of networks for various purposes, quality indicators, methods of servicing information flows, principles of modeling and design of telecommunication and information networks.

**TO BE ABLE:** to develop topologies and technological algorithms of telecommunication and information networks, to carry out technical and economic substantiation of projects of networks, to use theoretical positions at their designing.

### **Assessment system according to each task for passing the test / exam**

To evaluate the student's work during the semester, the final rating score of  $Q_{\text{sem}}$  is calculated as the sum of grades for different types of classes and tests west. Each laboratory work (2 hours) is estimated at 6 points practice, 4 points for protection). Abstract or project (R / P) - 24 points. Maximum rating during the semester - 100 points.

*The form of final control for the discipline is a combined exam.*

A student receives admission to the exam if during the semester the student received for all control measures of at least 60 points in a 100-point system.

The final grade is calculated as the sum of the grade for the semester weighing 0.6 and the grade for the exam weighing 0.4.

To evaluate the student's work during the semester, the final rating is calculated as the sum of grades for different types of classes and grades for control activities.

Each lecture is evaluated in 2 points (1 point for attendance, 1 point for activity). Each laboratory work is evaluated in a maximum of 14 points (2 points for attendance, 2 points for training, 10 points for defense). Home control work DKR - 30 points. The maximum rating during the semester is 100 points.

Type of lesson / control measure	Rating
Lb №1	6
Lb №2	6
Lb №3	6
Lb №4	6
Lb №5	6
Lb №6	6
Lb №7	6
Lb №8	6
Lb №9	6
Lb №10	6
Lk №1-8	16
PrW	24
<b>Total</b>	<b>100</b>

### Qualitative evaluation criteria in the national scale and ECTS

**Satisfactory, D, E (60-74).** Have a minimum of knowledge and skills. Work out and defend all laboratory work and PrW.

**Well, C (75-89).** It is firm to have a minimum of knowledge and skills. Work out and defend all laboratory work and R / P. Be able comment on the basic tasks and principles of Windows administration.

**Excellent, A, B (90-100).** Firmly know all the topics. Navigate the official sources of information about Windows. Work out and defend all laboratory work and PrW. Thoroughly know the tasks, principles and tools of Windows administration. Be able to configure and administer Windows, including AD DS administration.

## Assessment scale: national and ECTS

The sum of points for all types of educational activities	ECTS assessment	Score on a national scale	
		for exam, course project (work), practice	for offset
90 – 100	<b>A</b>	perfectly	credited
82-89	<b>B</b>	fine	
74-81	<b>C</b>		
64-73	<b>D</b>	satisfactorily	
60-63	<b>E</b>		
35-59	<b>FX</b>	unsatisfactory with the possibility of reassembly	not credited with the possibility of re-assembly
0-34	<b>F</b>	unsatisfactory with mandatory re-examination	not credited with compulsory re-study of the discipline

## Methodical support

### Basic literature

1. Informatsiini merezhi zviazku. Ch. 1. Matematychni osnovy informatsiinykh merezh zviazku: Navch. posibnyk. / V.M. Bezruk, Yu.M. Bidnyi, A.V. Omelchenko. Pid red. V.M. Bezruka – Kharkiv: KhNURE, 2011.

### Supporting literature

2. Telekomunikatsiini ta informatsiini merezhi: Pidruchnyk / P.P. Vorobiienko, L.A. Nikitiuk, P.I. Reznichenko. – K.: SAMMIT-KNYHA, 2010.
3. Steklov V.K., Berkman L.N. Proektuvannia telekomunikatsiinykh merezh: Pidruchnyk. - K.: Tekhnika, 2002.
4. Zaichenko Yu.P. Kompiuterni merezhi. – K.: Slovo, 2003.
5. Teoryia setei sviazy / Pod red. V.N. Rohynskoho. – M: Sviaz, 1979.
6. Morozov V.K., Domanov A.V. Osnovy teoryy ynformatsyonnykh setei. – M: Vysshaia shkola, 1987
7. Vasylev V.K. BurkynA.P., Svyrydenko V.A. Systemy sviazy. - M.: Vysshaia shkola, 1987.
8. Arypov M.N., Zakharov H.P., Malynovskyi S. H., Yanovskyi H.H. Proektyrovanye y tekhnicheskaiia ekspluatatsyia setei peredachy dyskretnykh soobshchenyi / Pod red. H.P. Zakharova. - M.: Radyo y sviaz, 1988.
9. Shvarts M. Sety sviazy: protokoly, modelyrovanye, analiz. T. 1 - M.: Nauka, 1992.
10. Kleinrok L. Vychyslytelnye systemy s ocherediamy. - M. Myr, 1979.
11. Kucheriavyi E.A. Upravlenye trafykom y kachestvo obsluzhyvaniya v sety Ynternet. - SPb.: Nauka y tekhnika, 2004.

Methodical instructions for different types of classes

12. Kompleks navchalno-metodychnoho zabezpechennia navchalnoi dystsypliny "Telekomunikatsiini ta informatsiini merezhi" pidhotovky bakalavra napriamu 6.050903 - Telekomunikatsii [Elektronnyi resurs]. Ch. 1 / KhNURE; rozrob. A. I. Kostromytskyi. – Kharkiv, 2017. – 364 c.
13. Kompleks navchalno-metodychnoho zabezpechennia navchalnoi dystsypliny "Telekomunikatsiini ta informatsiini merezhi" pidhotovky bakalavra napriamu 6.050903 - Telekomunikatsii [Elektronnyi resurs]. Ch. 2 / KhNURE; rozrob. A. I. Kostromytskyi. – Kharkiv, 2017. – 307 c
14. Metodychni vkazivky do kursovoho proektuvannia z dystsypliny "Telekomunikatsiini ta informatsiini merezhi" dlia studentiv usikh form navchannia napriamu 6.050903 "Telekomunikatsii" / Uporiad.: Yu.M. Bidnyi, O.M. Bukhanko – Kharkiv: KhNURE, 2012.