

**DISCIPLINE DESCRIPTION**  
**“Fundamentals of Computer Networks”**

1	Specialized module	Fundamentals of Computer Networks
2	Speciality	1-26 03 01 "Information Resources Management"
3	Course of Study	1
4	Semester	1
5	Credit units	3
6	Degree, title, full name of lecturers	Senior lecturer Onoshko D.
7	Objectives	Acknowledgement with the principles of building computer networks, studying the main network protocols used in modern networks are considered. Development of skills and abilities of creating and configuring simple computer networks.
8	Prerequisites	Computer networks
9	Syllabus	<p>Principles of building computer networks; basic network protocols and their capabilities. As a result of studying the discipline, students must:</p> <p><i>know :</i></p> <ul style="list-style-type: none"> <li>- the main types of architecture of computer systems (CS), their construction and functioning principles;</li> <li>- terminology of computer networks, the concept of a network node, resource, client, server, traffic, bandwidth;</li> <li>- classification of computer networks, in particular local and global networks;</li> <li>- the concept and basics of a seven-level model of open systems interaction, tasks and functions of i certain levels;</li> <li>- principles of organization and functioning of certain types of network nodes: amplifiers, repeaters, hubs, bridges, switches, routers, gateways;</li> <li>- functions, services and protocols of the Internet and the principles of their work;</li> <li>- methods of combining enterprise networks into a corporate network based on Internet network protocols.</li> </ul> <p><i>be able to :</i></p> <ul style="list-style-type: none"> <li>- use network technologies in their practical work;</li> <li>- use knowledge about network architectures in the process of choosing specific software and hardware for creating information systems.</li> </ul>

10	References	<p>1. Олифер, В.Г. Компьютерные сети. Принципы, технологии, протоколы: учебник для вузов / В.Г. Олифер, Н.А. Олифер. — 4-е изд. — СПб.: «Питер», 2010. — 944 с.</p> <p>2. Таненбаум, Э. Компьютерные сети / Э. Таненбаум. — СПб.: «Питер», 2002. — 848 с.: ил.</p> <p>3. Олифер, В.Г. Сетевые операционные системы / В.Г. Олифер, Н.А. Олифер. — СПб.: «Питер», 2001. — 544 с.: ил.</p> <p>4. Сурков, Д.А. Учебно-методическое пособие по курсу «Сети ЭВМ» в 2-х частях, часть 1 для студентов специальности 1-40 01 01 «Программное обеспечение информационных технологий» / Д.А. Сурков, С.В. Коростель, Е.В. Мельникова, И.М. Марина. — Мн.: БГУИР, 2006.</p>
11	Teaching Methods	Explanatory-illustrative, reproductive, partial-research, comparative, problematic, dialogue-heuristic, research, generalizing, analytical.
12	Tuition Language	Russian