

DESCRIPTION OF THE STUDY SUBJECT

Title

MANAGEMENT OF OPERATING SYSTEMS
--

Scope of the subject

Semester	Mode of studies	Structure*				Total number of hours	Number of credits	Group and type of subjects
		L	Lw	C	S			
III	Full-time	28	49	14	94	185	7	Compulsory subjects of the study field
IV	Part-time	8	16	28	54	185	7	
V		6	12	21	40			

*L – lectures, PS – practical activities, seminars, LW – laboratory work, PR – practice, CP – course paper, C – consultations, S – self-study

Aim of the subject

To be able to install and configure operating systems of Unix, Linux, Windows families and mobile devices, to solve main management problems of operating systems and software, to administer users, access rights.

Necessary background knowledge for studying the subject

-

Content of the subject

Title of the topic and description of the content	Number of contact hours			S	Total number of hours
	L	Lw	C		
1. The concept of the operating system (OS), basic concepts, interfaces, processes, threads, memory allocation, file systems. The concept, components, properties of the information system.	4	-	-	-	4
2. Management of Windows family operating systems.	6	-	-	-	6
Laboratory works: • Windows OS installation, boot management, administration of the system, user and resource access rights; • Management of Windows OS services, usage of the command line environment; • Assurance of Windows OS security, fault detection and removal.	-	12	3	18	33
Preparation for the defence of laboratory works and their defence No.1	-	2	-	7	9
3. Management of Linux family OS	7	-	-	-	7
Laboratory works: • Installation of Linux OS and additional software, boot management, system administration; • Management of user and resource access rights; • Installation of XWindows prototypes and use for OS management; • Management of Linux OS boots with several OS, the concept of bash scripts.	-	14	4	20	38
Preparation for the defence of laboratory works and their defence No. 2	-	2	-	7	7
4. Management of Unix family OS	6	-	-	-	6
Laboratory works: • Installation and management of UNIX OS with additional software; • Management of user, resource access rights and OS boot; • Installation and management of data exchange services in Unix OS; • Installation and management of Unix OS XWindows prototypes.	-	14	4	20	38
5. OS of mobile devices. The concept of virtual and real-time OS.	5	-	-	-	5
Laboratory work: • Installation and management of the operating system of mobile devices.	-	3	3	12	18
Preparation for the defence of laboratory works and their defence	-	2	-	10	12
Total number of hours	28	49	14	94	185

Assessment of learning outcomes

Ten-point criteria-based assessment system as well as cumulative assessment using individual cumulative index (ICI) are applied. The overall grade is the sum of grades for the defence of laboratory works (DLw) multiplied by weighted coefficients. $ICI = 0,3 DLw1 + 0,3 DLw2 + 0,4 DLw3$

Recommended literature

Key literature						
No.	Year of publishing	Author(s) and title of the publication	Publishing house	Number of copies and/or internet link		
				ŠSC library	Other premises	Other libraries *
1.	2013	Leonavičienė B. Windows 8	Smaltija	1	-	-
2.	2012	Sarafinienė N., Lagzdinytė-Budnikė I. ir kt. Operacinių sistemų architektūros	Technologija	5	-	6
3.	2011	Sarafinienė N. Operacinės sistemos	Technologija	1	-	5
Additional literature						
No.	Year of publishing	Author(s) and title of the publication	Publishing house and/or internet link			
1.	2015	Martin C. Rinard. Operating Systems Lecture Notes	http://people.csail.mit.edu/rinard/osnotes/			
2.	2014	Freebsd.lt. FreeBSD	http://freebsd.lt/			
3.	2010	x.org. foudation. Documentation for the X Window System Version 11 Release 7.6 (X11R7.6)	http://www.x.org/releases/X11R7.6/doc/			
4.	2009	Ubuntu.lt. Ubuntu Lietuvoje	https://www.ubuntu.lt/			
5.	2006	Sarafinienė N. Unix	Technologija			

* ŠAVB – Šiauliai Region Povilas Višinskis Public Library, ŠU – library of Šiauliai University

Required material resources and their short description

<ul style="list-style-type: none"> • Equipment (devices): computers (16 units), computers connected to the local network and connected to the Internet, multimedia projector, printer, computer laboratory (16 units), hard drives (16 pcs., at least 500 GB), random access memory (16 pcs., at least 4 GB). • Software: Windows 10, 8, 7 or later, Unix or Linux family network operating system distributions.

The description prepared by:

Associate Professor Dr. Vaidas Giedrimas