LINUX ADMINISTRATION

Faculty of Computer Science				
Study programme:	**Computer Science**		Degree level:	**Engineer's degree full-time programme**
Specialization	**---**		Diploma path:	**2026/2027W - 2026/2027S**
Module name:	**Linux Administration** (Administracja systemami Linux)			
Module type:	**obligatory**	**Semester: 1**	ECTS:**5**	Module ID:**FCS-00039**
No. of hrs in semester:	Lecture (L) - **26** Classes(C) - **0** Specialization workshop (SW) - **30** Project (P) - **0** Laboratory classes (LC) - **0** Seminar (S) - **0**			
Prerequisites	-			

Aims and objectives:	The aim of this course is to familiarize students with the installation, operation, and management of Linux systems, with a focus on basic administrative tasks. The course is largely designed to prepare students for the LPIC-1 and Red Hat System Administration I certification exams. References to the SFIA micro-competency educational framework: Operating System Administration (SYSP) – Level 2 Configuration Management (CFMG) – Level 2 IT Service Management (ITMG) – Level 2 Problem Solving (PBMG) – Level 2 User Support (USUP) – Level 2		
Forms of teching activities::	lecture, specialization workshop,	Assessment:	Evaluation must be relevant to the intended learning outcomes: Lecture - written exam Laboratory - exercise reports
Module content:	Lecture: 1. Introduction to Linux systems, the concept of free software 2. Using the command line 3. File management via the command line 4. Using system help 5. File resource management 6. Managing local users and groups 7. File access control 8. Monitoring and managing processes 9. Managing system services and daemons 10. Configuring the SSH service 11. Managing system logs 12. Installing and updating software packages 13. Course completion Specialized Lab: 1. Using the command line 2. File management via the command line 3. Using system help 4. File resource management 5. Managing local users and groups 6. File access control 7. Process monitoring and management 8. Managing system services and daemons 9. Configuring the SSH service 10. Managing system logs 11. Configuring network interfaces 12. Installing and updating software packages 13. Grading		
Teaching methods:	programming, lecture problem,		

Learning outcomes

Symbol	Specify min. 4, max. 8 learning outcomes in the following order: knowledge – skills – competence. Each learning outcome must be verifiable	Reference to the programme learning outcomes of education
LO1	knows the structure, properties and principles of Linux system	INF1_W03 INF1_W08 INF1_W12 INF1_W14
LO2	able to use a popular system utilities	INF1_U12 INF1_U13
LO3	know and solve common problems and tasks that a system administrator encounters and the methods and tools used in his work	INF1_U07 INF1_U12
LO4	can protect the operating system at a basic level	INF1_U12 INF1_U13 INF1_U14

No. of learning outcome	Methods of assessing the learning outcome	Type of teaching activities (if more than one) during which the outcome is assessed
LO1	written exam	L

LO2	reports	Sw	
LO3	written exam, tasks	Sw	
LO4	projects, implementation of scripts, written exam	Sw	
Student's workload (in hours)	**1** - Attendance at lectures	None	26
	2 - Attendance at laboratories	None	30
	3 - System configuration - projects	None	50
	4 - Participation in student-teacher sessions	None	4
	5 - Preparation for the exam	None	15
		TOTAL:	**125**
Quantitative indicators	Student's workload - activities that require direct teacher participation: (1)+(2)+(4)	60	**ECTS**
			2.4
	Student's workload connected with practical classes (2)+(3)	80	3.2
Basic references:	1. GNU Linux System Manual 2. LPIC-1 course materials (provided to students in electronic format) 3. LPIC-2 course materials (provided to students in electronic format) 4. Red Hat System Administration I course materials (provided to students in electronic format)		
Further reading	1. Debian system documentation - http://www.debian.org/doc 2. Fedora system documentation - http://docs.fedoraproject.org 3. CentOS system documentation - https://docs.centos.org		

Unit:	Department of Information Systems and Computer Networks	Lecturer/ instructor	
Date of issuing the programme:	30th March 2026	Author of the programme:	dr inż. Andrzej Chmielewski,dr hab. inż. Ireneusz Mrozek

L - lecture, C - classes, LC - laboratory classes, P-project, SW - specialization workshop, S - seminar