

System Server Administration

System Server Administration						
Course code CIF61022		student workload 90 hours	credits (according to ECTS) 4.5 ECTS	semester Sem. 5 or 7	frequency each odd-semester	duration 16 meetings
1	Types of courses elective	contact hours 63 hours		independent study 27 hours	class size 40 students	
5	Prerequisites for participation Completed Computer Network					
2	<p>Learning outcomes</p> <p>IF-ILO-3 Graduates are able to develop professional careers in the field of computer science based on quality aspects, data-based decision making, be responsible, and make continuous improvements.</p> <p>IF-ILO-7 Mastering the theoretical concept and principles of computer science, especially in the aspect of algorithms, programming, intelligent systems, information management, parallel and distributed computing, information security, human-computer interaction, software engineering, and fundamentals of computer systems and networks.</p> <p>IF-ILO-11 Graduates are able to plan, develop, manage, and analyze the computer network-based system and the services running on top of them by considering the network security aspects.</p>					
3	<p>Subject aims</p> <ol style="list-style-type: none"> 1. Students are able to explain the basic concepts of server system administration 2. Students are able to demonstrate the ability to apply basic Unix/Linux commands 3. Students are able to demonstrate the ability to manage infrastructure based on virtual machines 4. Students are able to demonstrate the ability to manage storage servers 5. Students are able to demonstrate DNS management skills 6. Students are able to demonstrate the ability to manage web technology development services (web stack) 7. Students are able to demonstrate the ability to manage container-based virtual machines 					

	<ol style="list-style-type: none"> 8. Students are able to demonstrate the ability to manage the orchestration mechanism of container-based virtual machines 9. Students are able to apply high availability and fault tolerance strategies in server management 10. Students are able to implement a monitoring mechanism and guarantee the security of services running on a server 11. Students are able to design server management that meets the rules of functionality, high-availability, fault tolerance and security in a case study
4	Teaching methods lectures, case study, class discussion, presentation
6	Assessment methods assignment, mid-term examination, end-term examination, project evaluation, practical-skill assessment
8	This module is used in the following degree programmes as well Informatics Engineering
10	Responsibility for module <i>Name of lecturers</i>
11	Other information <ol style="list-style-type: none"> 1. Nemeth, Evi, et al. "UNIX and Linux system administration handbook." USENIX Open Access Policy (2018): 59. 2. Poulton, Nigel. Docker Deep Dive. JJNP Consulting Limited, 2019. 3. Matthew Portnoy, Virtualization Essentials, Wiley, 2012.