

Name: Operating Systems		NEPTUN-code: <i>NIEORIEBNE</i>	Number of periods/week: full-time: 2 lec + 0 sem +3 lab
Credit: 5 Requirement: exam		Prerequisite: <i>NIXSHOEBNE</i> Computer Networks	
Responsible: András RÖVID, Ph.D.	Position: associate professor	Faculty and Institute name: John von Neumann Faculty of Informatics Institute of Applied Mathematics	
Way of assessment:			
<ul style="list-style-type: none"> - requirements for signature: passing the two mid-terms (written during the labs) - written midterm 			
Competences			
Course description:			
<p>During the semester the students get to know the main tasks of the operating systems, the parts of the operating systems, and the different implementation possibilities of each part. During the semester the course uses real world examples from today's most widespread operating systems.</p> <p>In the lab practices the students learn the means of administering operating systems on an advanced level. The focus is on the command line based operation of Linux, however at certain points solutions from other operating systems (e.g. Microsoft Windows) are also presented.</p> <p>Main competences: architectures of operating systems, major functions and modules of operating systems (process and thread handling, scheduling, memory management, I/O and file management, communication between processes), evolution of operating systems, interface standardisation, solutions in today's most widespread operating systems.</p>			
Literature			
<p>Operating Systems: Internals and Design Principles by William Stallings, 8th ed, Pearson, 2014</p> <p>Operating System Concepts by Abraham Silberschatz, Peter B. Galvin and Greg Gagne, 9th ed, Wiley, 2012</p> <p>Modern Operating Systems by Andrew S. Tanenbaum and Herbert Bos, 4th ed, Pearson, 2014</p> <p>Windows Internals by Mark Russinovich, David Solomon and Alex Ionescu, 6th ed, Ms Press, 2012</p> <p>Systems Performance: Enterprise and the Cloud by Brendan Gregg, Prentice Hall, 2013</p>			