

<b>Study programmes:</b> Bachelor studies - Mathematics			
<b>Course name:</b> R222 - Computer architecture 2			
<b>Lecturers:</b> Teachers from Department of Computer Science			
<b>Status:</b> Optional			
<b>ECTS:</b> 6			
<b>Attendance prerequisites:</b> RM03, RM15			
<b>Course aims:</b> Acquiring general and specific knowledge about computer hardware, computer components, its organization and function, as well as about chip design and fabrication (VLSI design).			
<b>Course outcome:</b> After the course is finished, the student has deep knowledge about computer organization, machine and assembly languages, architecture of existing systems, and chip design and fabrication.			
<b>Course content:</b>			
<ul style="list-style-type: none"> <li>- Intel architecture</li> <li>- Microprogramming</li> <li>- MOS transistor and its characteristics</li> <li>- Chip design and fabrication</li> <li>- VLSI design of basic circuits</li> <li>- VLSI design of complex circuits</li> </ul>			
<b>Literature:</b>			
V. Carl Hamacher, Zvonko G. Vranesic, Safwat G. Zaky: Computer organization, McGraw-Hill, 2002 (a teacher may also choose other contemporary literature)			
<b>Number of hours:</b> 5	<b>Lectures:</b> 2	<b>Tutorials:</b> 3	<b>Laboratory:</b> - <b>Research:</b> -
<b>Teaching and learning methods:</b> Frontal, Group, Exercises.			
<b>Assessment (maximal 100 points)</b>			
<b>Course assignments</b>	<b>points</b>	<b>Final exam</b>	<b>points</b>
Lectures	5	Written exam	-
Exercises / Tutorials	-	Oral exam	-
Colloquia	35	Written-oral exam	60
Essay / Project	-		