Obuda University John von Neumann Faculty of Informatics	Institute of Cyber-physical systems

Name and code: Advanced Computer Architectures II. / NIXKA2EBNE   **Credits:** *4*

Computer Science and engineering BSc programme   2022/23 year I. semester

Subject lecturers: Zsolt Bringye

Prerequisites (with code):	*Advanced Computer Architectures I. / NIXKA1EBNE*		
Weekly hours:	Lecture: 2	Seminar.: 0	Lab. hours: 0	Consultation: 0
Way of assessment:	Exam			

Course description:

Goal: The goal of the subject is to provide an overview on multi core – multi threaded processors and their architectures.

Course description: Evolution of Intel Core 2 family. The Intel's CPU landscape from the mobile CPUs to multi-sockets servers. ISA extensions, evolution of CPU's microarchitecture. The Zen family from AMD. The mobile boom, development of ARM CPUs microarchitecture.

Lecture schedule

Education week	*Topic*
1.	The Core2 family
2.	The Core2 family
3.	The AMD Zen family
4.	The AMD Zen family
5.	ARM Cortex-A CPUs
6.	CPU dissipation, power management
7.	Advanced power management
8.	Client CPU platforms
9.	Server CPU platforms
10.	Multi-socket platforms
11.	SMP and NUMA solutions, evolution of memory access methods
12.	Mobile CPU architectures
13.	Mobile CPU architectures

Midterm requirements

None

Final grade calculation methods

Achieved result	Grade
86%-100%	excellent (5)
74%-85<%	good (4)
62%-73<%	average (3)
50%-61<%	satisfactory (2)
0%-49<%	failed (1)

Type of exam
Written exam
Type of replacement
References
Mandatory: Lecture notes (download form https://elearning.uni-obuda.hu/)
Recommended:

2022. 06. 09.