

Obuda University John von Neumann Faculty of Informatics		Institute of Applied Informatics		
Name and code: <i>Architectures of Parallel and Distributed Systems (NIRPRIMANM)</i> Credits: 4				
2014/15 year I. semester				
Subject lecturers: Dr. Fehér Gyula				
Prerequisites (with code):				
Weekly hours:	Lecture: 2	Seminar.: 0	Lab. hours: 0	Consultation: 0
Way of assessment:	Theoretical test and oral examination			
Course description:				
<i>Goal:</i> This course covers comprehensive overview of emerging IT solutions and general introductory concepts in the design and implementation of parallel and distributed systems covering the major branches such as cloud computing, grid computing, cluster computing, supercomputing, provide students with an insight into the challenges of IT today.				
<i>Course description:</i> Parallel and distributed systems can be defined as a collection of processing elements that cooperate and communicate in order to achieve a common goal. This course is intended to focus on the various services, architectures, components, principles and practices of parallel and distributed systems solutions.				

Lecture schedule	
<i>Education week</i>	<i>Topic</i>
1.	Introduction and examples of IT challenges we have to deal with today
2.	Parallel, concurrent and distributed computing systems
3.	Cloud services, service deployment solutions
4.	Communication infrastructure systems (LAN, WAN, Fabric solutions)
5.	Communication services and protocols, web solutions (1,2,3)
6.	Storage systems (DAS, NAS, SAN).
7.	Storage protocols (SCSI,FC,iSCSI,FCoE
8.	Advanced multi core processors and their applications
9.	Server, I/O and network consolidation, server architectures
10.	Virtualization (server, network, storage virtualization)
11.	Holiday (19.11.2014)
12.	Ensure high availability and QoS
13.	Written examination
14.	Replacement examination

Homework schedule	
<i>Education week</i>	
5.	
9.	
12.	

Midterm requirements	
Regular attendance is expected.	

Final grade calculation methods

A minimum of 50% must be achieved.

Achieved result	Grade
89%-100%	excellent (5)
76%-88<%	good (4)
63%-75<%	average (3)
51%-62<%	satisfactory (2)
0%-50<%	failed (1)

Type of exam

Written test & oral examination

Type of replacement

In the 14th week, both for written test & oral exam.

References

Obligatory: Lecture notes

Recommended:

D. E. Culler, J. P. Sing, Parallel Computer Architecture, Morgan Kaufmann Publisher, Inc., San Francisco, California, 1999

D. Sima, T. Fountain, P. Kacsuk, Advanced Computer Architectures, Pearson Education Limited, Edinburgh, 1997

Textbook: A.S. Tanenbaum, M. van Steen, Distributed System, Prentice Hall, 2002

P. J. Fortier, H. E. Michel: Computer Systems Performance Evaluation and Prediction, Digital Press, 2003

Tom Clark: Storage Virtualization, Technologies for Simplifying Data Storage and Management, Addison-Wesley, 2005

Other materials: Some Tutorial/Survey Papers from Journals