



Course title:	High Performance Computing
Department:	F-3, Department of Computer Science
Course code:	F34-HPC
Erasmus subject code:	Informatics, Computer Science
Number of contact hours:	45 hours
Course duration:	1 semester
ECTS credits:	6
Course description:	Architectures for high performance computing - processors, parallel systems. OpenMP, MPI, Classical and parallel optimization. Basis of the x86 assembly language. Parallel algorithms for linear algebra and PDE simulation, GPGPU OpenCL/CUDA computations.
Literature:	L. Ridgeway Scott, Terry Clark, Babak Bagheri, „Scientific Parallel Computing”, Princeton University Press, 2005 Kevin Dowd, Charles Severance, "High Performance Computing", 2nd ed., O'Reilly, 1998.
Course type:	Lectures and laboratory classes
Assessment method:	Attendance, evaluation of every laboratory, exam
Prerequisites:	Advanced C or C++ programming language, Basic parallel/concurrent programming. Basic knowledge of Linux operating system.
Primary target group:	3-rd – 4-th year computer science students
Lecturer:	Filip Kruzel, MSc
Contact person:	Filip Kruzel, MSc fkruzel@pk.edu.pl
Deadline for application:	15th of January
Remarks:	