Faculty of Applied Sciences

INGI2346   Design of distributed applications

[30h+15h exercises] 4 credits

This course is taught in the 2nd semester

Teacher(s):   Marc Lobelle (coord.), Peter Van Roy
Language: French
Level: Second cycle

Aims

-To design distributed applications, in particular to define the application protocols for these applications.Distributed applications consist of software components cooperating through a network. The network may be hostile and the applications can run on computers of different types and using different operating systems.

Main themes

- Main classical programming models for distributed applications.
- Introduction to the theoretical background of distributed applications.

Content and teaching methods

- Introduction
- Low level programming model (socket interface)
- Client / server model (rpc, rmi, ¿ interfaces) including security aspects
- Symmetrical programming model(PVM interface)
- Bases of theoretical background (concurrency and parallelism in access to information)

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

- Prerequisite:
(1) General knowledge in computer networking
(2) General knowledge in operating systems and ability to program in C on UNIX) (for instance LINF 1252, INGI 2113, INGI 2716)
- References :
(1) W.R. Stevens " UNIX Network Programming, vol 1 " Prentice Hall 1998
(2) Rpco Rmio Geist & al. " PVM : Parallel Virtual Machine " MIT Press 1994
- Assessment:
Written exam with the possibility to discuss the answers during the exam with the professor.

Programmes in which this activity is taught

INFO2   Ingénieur civil informaticien

Other credits in programs

FSA3DS/IN	Diplôme d'études spécialisées en sciences appliquées (informatique)	(4 credits)
INFO21	Première année du programme conduisant au grade d'ingénieur civil informaticien	(4 credits)
INFO22	Deuxième année du programme conduisant au grade d'ingénieur civil informaticien	(4 credits)
INFO23	Troisième année du programme conduisant au grade d'ingénieur civil informaticien	(4 credits)
LINF22	Deuxième licence en informatique	(4 credits)
LINF22/GN	Deuxième licence en informatique (informatique générale)	(4 credits)