UCL Faculté des sciences appliquées

FSA

LINF1252 Introduction aux systèmes informatiques

[30h+30h exercises] 6 credits

This course is taught in the 2nd semester

Teacher(s): Marc Lobelle
Language: french
Level: 1st cycle course

Aims

- To Understand and to explain the functionalities provided by the different hierarchical levels of the architecture of a computing system, from the physical machine to software components directly supporting the applications
- To understand and explain typical system architectures their components, as well at the hardware as the operating system level.
- To use and to configure efficiently functions and services provided by computers and operating systems
- To compare various computer implementations and identify their strengthes and weaknesses
- To know and to understand the implications of the orders of magnitude of measurable characteristics of computing systems

Main themes

- Abstraction levels in computing systems
- Architectures of processors
- Memory hierarchy
- Peripherals and peripheral interfaces
- Techniques for performance enhancement
- Machine language, assembly language and C language
- Mission and functions of operating systems
- Key concepts in operating systems
- Use of operating system functions in C programs
- C programming on computer without OS.

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

- Prerequisite:
(1) Mastering a high level language such as Java, C or C++.
(2) Passive technical english
- References
Mandatory Book:
(1) Tanenbaum, A. S., "Modern Operating Systems (second edition)" , Prentice Hall Inc, 2001
Recommended reading
(2) Patterson, D. A. and Hennessy, J .L. , "Computer Organization and Design: the Hardware / Software Interface" , Morgan Kaufman Publ. Inc, 1998.
(3) Stevens, R. W, "Advanced Programming in the Unix Environment" , Addison-Wesley Inc, 1992.
- Organisation
(1) Individual and group based active learning
(2) Course language: French ; the course can be taken by English speaking students

Other credits in programs

COMU22/J	Deuxième licence en information et communication (Journalisme)	(6 credits)	
ECGE12/IN	Deuxième candidature en sciences économiques et de gestion (Informatique)	(6 credits)	Mandatory
ECGE3DS/IG	Diplôme d'études spécialisées en économie et gestion (informatique de gestion - Master in Information Systems)	(6 credits)	
LINF1EP	Année de formation préparatoire à la licence en informatique	(6 credits)	Mandatory
LING2MS	Master en linguistique, à finalité spécialisée en ingénierie linguistique	(6 credits)	
MATH22/E	Deuxième licence en sciences mathématiques (Economie mathématique)	(6 credits)	
MATH22/G	Deuxième licence en sciences mathématiques	(6 credits)	
MATH22/S	Deuxième licence en sciences mathématiques (Statistique)	(6 credits)	
SINF11BA	Première année d'études de bachelier en sciences informatiques	(6 credits)	