UCL Faculté des sciences appliquées

FSA

INGI2132	Langages et traducteurs

[30h+30h exercises] 5 credits

This course is taught in the 2nd semester

Teacher(s):   Baudouin Le Charlier (coord.), Peter Van Roy
Language: french
Level: 2nd cycle course

Aims

- To understand and explain in a practical way the structure of compilers dealing with algorithmic languages
- To design and implement a compiler for a practical language which solves a interesting problem
- To show the interest of compiling techniques in problem resolving
- To carry individually a project of reduced size through

Main themes

- Methods to analyze context-free languages, upstream and downstream methods
- Generators of lexical analyzers and parsers
- Statistical semantics and attributed grammars
- Methods to translate a source code in a target code, and generation of target code

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

- Prerequisites
(1) LINF2121 Algorithmique et structures de données P. Dupont
(2) INGI2131 Concepts des langages informatiques P. VanRoy
(NB : the second prerequisite can be followed at the same time as this course)
- References
Recommended readings
(1) N. Wirth , "Compiler Construction" , Addison-Wesley , 1996, 0-201-40353-6.
(2) Robin Hunter, "The design and construction of compilers" , Wiley, 1981.
(3) A. V. Aho, R. Sethi, and J. D. Ullman, "Compilers: Principles, Techniques, and Tools" , Addison-Wesley , 1986.
(4) A. V. Aho, R. Sethi, and J. D. Ullman, "Compilateurs: principes, techniques et outils" , InterEditions, 1989.
(5) R. Wilhelm and D. Maurer, "Compiler Design" , Addison-Wesley , 1995.
- Organization
A project should be performed individually

Other credits in programs

INFO21	Première année du programme conduisant au grade d'ingénieur civil informaticien	(5 credits)	Mandatory
INFO22	Deuxième année du programme conduisant au grade d'ingénieur civil informaticien	(5 credits)	
LINF21	Première licence en informatique	(5 credits)	
LINF21/GN	Première licence en informatique (informatique générale)	(5 credits)	Mandatory
LINF22/GS	Deuxième licence en informatique (informatique de gestion)	(5 credits)	
LING2MS	Master en linguistique, à finalité spécialisée en ingénierie linguistique	(5 credits)	
MATH22/E	Deuxième licence en sciences mathématiques (Economie mathématique)	(5 credits)	
MATH22/G	Deuxième licence en sciences mathématiques	(5 credits)	
MATH22/S	Deuxième licence en sciences mathématiques (Statistique)	(5 credits)	