Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
INF114	Algorithms and Advanced Programming	2	3	0	2	4	5

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	In this course, the fundamental concepts covered in the first class course "Introduction to Programming" are consolidated. Particularly the topics of pointers, dynamic memory allocation and management, file operations, introduction to algorithm analysis and introduction to data structures are elaborated. In the course practice (laboratory) C programming language and the Linux operating system are used.
Content	1. Introduction and Reminders 2. Advanced Variable Types 3. C Preprocessor, Libraries 4. Pointers 5. Dynamic Memory Management 6. Pointers, Arrays and Functions 7. String Operations 8. Introduction to Data Structures 9. Advanced Data Structures 10. Algorithm Analysis
References	1. Course slides and notes 2. Reference Books - 21st Century C, Ben Klemens, O'Reilly Media, 978-1-449-32714-9, 2013 - Understanding and Using C Pointers, Richard Reese, O'Reilly Media, 978-1-449-34418-4, 2013

Theory Topics

Week	Weekly Contents