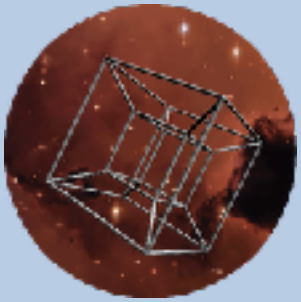
European Virtual Exchange

Sorbonne Université	**Concurrent programming (3I001)**			
Course description	Concurrent programming is becoming an issue since most devices (computers, phones, etc) now embed several cores or processors. The goal of this course is to provide students with the basics of concurrent programming and details the main mechanisms you can use in various languages to implement distributed algorithms. It is a good complement to a distributed algorithms course.			
Domain	Computer science			
Keywords	Thread	Concurrent programming	Concurrency in Java	Shared data
Prerequisites	The knowledge of programming, and the use of an object oriented language is of importance. Java is briefly recalled at the beginning of the course but preliminary practice helps..			
Level	Bachelor (3rd year)			
Language	French with english subtitles			
Number of credits and workload	**6 credits**	**5-7 hrs per week**	**77 hrs in total**	
Semester period and Start date course	**Semester** 1	**Start date**: 11-Sep-18		
Application deadline	10-Sep-18			
Full course description	The objective of this course is to address the main problems related to the development of competing programs. It also offers a first opening towards distributed algorithms. The main notions to be presented are: - The role of the language runtime (as a view on the operating system) in the execution of a program, - The notion of tasks, processes, and threads, -The problem of concurrent access to shared data, -The different mechanisms to protect shared data,-Communication mechanisms between threads, -The basics about the termination of a concurrent program,-The structure of a server program, - Some basics about concurrent algorithmic. Practice is performed using Java			
Platform and link to course description	Dedicated companion web site	https://www-licence.ufr-info-p6.jussieu.fr:8083/lmd/licence/2017/ue/3I001-2017oct/ (for2017/2018)		
Course description in study guide	http://www-licence.ufr-info-p6.jussieu.fr/lmd/licence//public/espace_public/offres_formation/descr_ue.php?code_ue=3I001			
Lecturer(s)	Fabrice Kordon			

Picture of course			
Final examination date and time / period		Examination time: TBC	7-12 January 2019
Examination registration deadline or drop-out deadline	Examination registration before: N/A Drop- out deadline: N/A		
Type of examination	Written		
Midterm examination?	☐ **yes** ☒ **no**		
Previous exam papers available	☒ **yes** ☐ **no**		
Specific rules for examinations			
Resit? and date	☒ **yes** ☐ **no**	11-17 June	
Grade release and transcript release	February		