

CS-206	Parallelism and concurrency				
	Kashyap Sanidhya, Kuncak Viktor				
Cursus		Sem.	Туре	Language of	English
Communication systems		BA4	Obl.	teaching	Ligisti
Computer science		BA4	Obl.	Credits Session	4 Summer
				Semester Exam Workload Weeks Hours Lecture Exercises Practical work Number of positions	Spring During the semester 120h 14 4 weekly 1 weekly 1 weekly 2 weekly

Remark

réservé aux étudiants de IC devant refaire la matière

Summary

Course no longer offered for new students; this edition is only a make-up course for those who repeated the year. Please log in with EPFL credentials and consult the mediaspace link below for course videos.

Content

(See https://gitlab.epfl.ch/lamp/cs206 for more information.) Threads and fork/join parallelism Synchronization Java Memory Model Parallel programming Data-level parallelism Task-level parallelism Futures

Keywords Parallelism, threads, synchronization, locks, memory models.

Learning Prerequisites

Required courses

- Functional programming (CS-210)
- Algorithms (CS-250)
- Computer Architecture (CS-208)

Recommended courses System oriented programming (CS-207)

Important concepts to start the course Algorithms and data structures

- Graded labs
- Midterm
- Final exam

Resources

Bibliography

Maurice Herlihy and Nir Shavit. 2012. The Art of Multiprocessor Programming, Revised Reprint (1st. ed.). Morgan Kaufmann Publishers Inc., San Francisco, CA, USA. (available from EPFL library)

Ressources en bibliothèque

• The Art of Multiprocessor Programming / Herlihy

Moodle Link

• https://go.epfl.ch/CS-206

Videos

• https://mediaspace.epfl.ch/channel/CS-206+Parallelism+and+concurrency/31866/subscribe