

CS-323(a)

**Operating systems implementation**

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Cursus	Sem.	Type
Communication systems	BA6	Opt.
Computer science	BA6	Opt.

Language of teaching	English
Credits	4
Session	Summer
Semester	Spring
Exam	During the semester
Workload	120h
Weeks	14
<b>Hours</b>	<b>2 weekly</b>
Project	2 weekly
<b>Number of positions</b>	

**Summary**

Implementation of basic concepts of operating systems in Linux

**Content**

Implementation of system calls, interrupt handling, process and memory management and file systems

**Keywords**

Operating systems implementation, Linux

**Learning Prerequisites****Required courses**

CS-206 Parallelisme and concurrency

CS-207 Systems programming

CS-323 Operating systems (preferably to be taken concurrently)

Strictly no admission without concurrent or prior CS-323.

**Learning Outcomes**

By the end of the course, the student must be able to:

- Implement key components of operating systems

**Teaching methods**

Introduction and discussion of assignments in exercise sessions.

**Expected student activities**

Attendance at exercise sessions.

Implementation of several programming projects.

**Assessment methods**

Programming assignments.

Equal value for each assignment.

**Supervision**

Office hours	Yes
Assistants	Yes
Forum	Yes

## Resources

### Bibliography

Operating Systems : Three Easy Pieces, R. Arpaci-Dusseau and A. Arpaci-Dusseau (free online book).  
Linux Kernel Programming, 3rd Edition, R. Love.  
Slides available on Moodle.

### Ressources en bibliothèque

- [Linux Kernel Programming / Love](#)
- [Operating Systems : Three Easy Pieces / Arpaci-Dusseau](#)