The course teaches fundamentals and advanced topics of operating system engineering. Students will implement, from scratch, a minimalistic yet fully functional operating system that supports virtual memory, kernel and user modes, system calls, threads, context switches, interrupts, interprocess communication, coordination of concurrent activities, file system I/O, and networking. Students will further learn advanced topics from the forefront of operating systems research, and they will implement some of these in the final project.

Workload:

One short quiz and five practical exercises, culminating in a project which will be presented by the students in class; all of these will be finished before the exams period. Assignments are done in pairs. For undergraduate students the course fulfills the project requirement.

Academic credit points: 4

Staff:

- Lecturer: Dan Tsafrir (dan@cs)
- TA: Igor Smolyar (igors@cs)
- Checker: Marina Minkin (mini@campus.technion.ac.il)

Prerequisites:

- CS: 234123 (operating systems), or
- EE: 046209 (structure of operating systems) and preferably 046210 (lab in operating systems)