Course description

Course abbreviation:	KI/OSY	**Page:**	1 / 2
Course name:	Operating Systems		
Academic Year:	2012/2013	**Printed:**	29.03.2024 06:25

Department/Unit /	KI / OSY			**Academic Year**	2012/2013
Title	Operating Systems			**Type of completion**	Exam
Accredited/Credits	No, 5 Cred.			**Type of completion**	Combined
Number of hours	Přednáška 2 [HOD/TYD] Cvičení 2 [HOD/TYD]				
Occ/max	Status A	Status B	Status C	**Course credit prior to**	YES
Summer semester	59 / -	0 / -	0 / -	**Counted into average**	YES
Winter semester	0 / -	0 / -	0 / -	**Min. (B+C) students**	not determined
Timetable	Yes			**Repeated registration**	NO
Language of instruction	Czech, English			**Semester taught**	Summer semester
Optional course	Yes			**Internship duration**	0
Evaluation scale	1|2|3|4			**Ev. sc. – cred.**	S|N
No. of hours of on-premise					
Auto acc. of credit	No				
Periodicity	K				
Substituted course	None				
Preclusive courses	N/A				
Prerequisite courses	N/A				
Informally recommended courses	N/A				
Courses depending on this Course	N/A				

Course objectives:

The course is targeted to basic principles of contemporary operating systems and to its internal structure, especially from the view of application programmers (i.e. at the level of kernel API of POSIX and Win32).

Requirements on student

Content

1. OS architecture (hierarchic vers. client-server)
2. memory management (limits of trivial managers, memory virtualization)
3. process and thread (preemptive multitasking and process scheduling)
4. interprocess synchronization and communication
5. file system
6. input-output subsystem (drivers)
7. multiprocessing

Prerequisites - other information about course preconditions

Teaching in English is meant only for erasmus and foreign students. In the case of a small number of students is teaching in a form of individual consultations.

Competences acquired

Fields of study

Guarantors and lecturers

- **Guarantors:** Mgr. Jiří Fišer, Ph.D. (100%)
- **Lecturer:** Mgr. Jiří Fišer, Ph.D. (100%)

- **Tutorial lecturer:** Ing. Pavel Kuba, Ph.D. (100%)

Literature

- **Basic:** Bach M. *Design of the UNIX Operating System*. Prentice Hall, 1986.
- **Basic:** Fišer J. *Principy operačních systémů I.*. skriptum PřF UJEP, 2004. ISBN 80-7044-505-X.
- **Basic:** Bovet D.P., Cesati M. *Understanding the Linux kernel*. O'Reilly, 2003.
- **Extending:** Advanced Micro Device. *AMD64 Architecture Programmer's Manual Volume 2: System Programming.*.
- **Extending:** Fišer J. *GNU/Linux pro začátečníky*. skriptum PřF UJEP, 2005.
- **Extending:** Goodheart B., Cox J. *The Magic Garden Explained: The Internals of Unix System V Release 4*. Prentice Hall, 1994.

Teaching methods

Assessment methods

Course is included in study programmes:

Study Programme	Type of	Form of	Branch	Stage	St. plan v.	Year	Block	Status	R.year	R.
Applied Informatics	Bachelor	Full-time	Information Systems	1	A11	2012	Povinné předměty	A	2	LS
Applied Informatics	Bachelor	Full-time	Information Systems	1	A12	2012	Povinné předměty	A	2	LS
Applied Informatics	Bachelor	Full-time	Information Systems	1	A8	2012	Povinné předměty	A	2	LS
Geography	Bachelor	Full-time	Information Sciences (double subject)	1	A6	2012	Povinné kurzy	A	2	LS
Geography	Bachelor	Full-time	Information Sciences (double subject)	1	A10	2012	Povinné předměty	A	2	LS
Chemistry	Bachelor	Full-time	Informatics	1	A6	2012	Povinné kurzy	A	2	LS
Chemistry	Bachelor	Full-time	Informatics	1	A10	2012	Povinné předměty	A	2	LS
Chemistry	Bachelor	Full-time	Informatics Focused on Education	1	A10	2012	Povinné kurzy	A	2	LS
Informatics	Bachelor	Full-time	Informatics Focused on Education	1	A7	2012	Povinné kurzy	A	2	LS
Informatics	Bachelor	Full-time	Informatics Focused on Education	1	A10	2012	Povinné kurzy	A	2	LS
Informatics	Bachelor	Full-time	Information Sciences (double subject)	1	A10	2012	Povinné předměty	A	2	LS
Informatics	Bachelor	Full-time	Information Sciences (double subject)	1	A8	2012	Povinné kurzy	A	2	LS
Mathematics	Bachelor	Full-time	Informatics focused on Education	1	A7	2012	Povinné kurzy	A	2	LS
Mathematics	Bachelor	Full-time	Informatics focused on Education	1	A10	2012	Povinné kurzy	A	2	LS
Mathematics	Bachelor	Full-time	Information Sciences (double subject)	1	A10	2012	Povinné předměty	A	2	LS
Mathematics	Bachelor	Full-time	Information Sciences (double subject)	1	A6	2012	Povinné kurzy	A	2	LS
Physics	Bachelor	Full-time	Informatics	1	A10	2012	Povinné předměty	A	2	LS
Physics	Bachelor	Full-time	Informatics	1	A6	2012	Povinné kurzy	A	2	LS
Physics	Bachelor	Full-time	Informatics focused on Education	1	A10	2012	Povinné kurzy	A	2	LS