

## Tárgy neve: Operating systems

Tárgyfelelős neve: Dr. Kovács Béla

Tárgyfelelős tudományos fokozata: PhD

Tárgyfelelős MAB szerinti akkreditációs státusza: AT

Az oktatás célja:

a, knowledge

- Knowledge of open- and closed-source operating systems
- Knowledge of distributed resource and supercomputing systems
- Knowledge of virtualised computing environments
- Installation and operation of linux systems
- Operation of field data collection devices
- Mobile device architecture

b, abilities

- Ability to use non MS-based operating systems (Unix, linux, android, etc.)
- Ability to install and operate open-source operating systems in real and virtualised environments
- Ability to perform basic management of cloud-based systems
- Program and operate field data collection tools
- Ability to perform basic management of computer local area networks

c, attitude

- Accepts and adheres to the ethical principles of work and organizational culture, especially with regard to the copyright related to geoinformatics.
- Committed to adhering to and making others adhere to quality requirements.

d, autonomy and responsibility

- Independence regarding the thorough examination and elaboration of professional issues and processes.
- Feels responsible for meeting and making others meet the deadlines. He/she is responsible for his/her work and for his/her co-workers' work in projects.
- With his/her knowledge and skills of geoinformatics, he/she cooperates responsibly with professionals in other fields.

Az oktatás tartalma:

- the basics of operating systems, terms and acronyms (UNIX, linux, free, non-free, BSD, CC, etc.)
- the core of UNIX-based systems
- the core of GNU/linux-based systems
- the TCP/IP networks
- UNIX/linux base commands and system programs
- virtualisation and paravirtualization techniques
- Debian/Ubuntu-based systems
- RH/CentOS-based systems
- other operating systems (Android, BSD etc.)
- create and manage the graphical UI
- mini systems, microcomputers, field data loggers

A számonkérés és értékelés rendszere: practical course mark based on course work.

Kötelező irodalom:

- Online help and manual pages of the selected operating systems (<https://man7.org/linux/man-pages/>)
- Modern Operating Systems, Andrew S. Tanenbaum and Herbert Bos, 4th edition, Pearson plc. 2015, ISBN: 978-0133591620

Ajánlott irodalom:

- UNIX Tutorial for Beginners (<http://www.ee.surrey.uk/Teaching/Unix>)

- A Practical Guide to Linux Commands, Editors, and Shell Programming, Mark G. Sobell, 3rd Edition, Pearson plc. 2012, ISBN: 978-0133085044
- UNIX and Linux System Administration Handbook, by Evi Nemeth, Garth Snyder, Trent Hein, Ben Whaley, Dan Mackin, 5th Edition, Addison-Wesley Professional, 2017, ISBN: 978-0134277554