SYLLABUS

Name: ***Operating Systems (InfAAu>SI5OS19)***
Name in Polish:
Name in English: ***Operating Systems***

Information on course:

Course offered by department: Faculty of Automatic Control, Electronics and Computer Science
Course for department: Silesian University of Technology

Default type of course examination report:

EGZ

Language:

English

Course homepage:

https://platforma2.polsl.pl/rau2/course/view.php?id=260

Short description:

The goal of the course is to introduce students into the subject of modern operating systems that are considered as robust resource management environment and user interface layer. During this course students will obtain the basic knowledge on configuring and administering of operating systems and solving classical resource management problems with a particular focus on processor and memory related tasks.

Description:

ECTS: 3
Total hours: 75 h (40 hours of contact hours, 35 student's own work hours)

Forms of contact hours:
Laboratory 30h
Other (report review and discussion) 10h

Student's own work: preparation for classes, analysis of laboratory results, preparation for tests.

This semester includes laboratories; the previous semester included a lecture.

Laboratory (list of laboratory exercises):
1. Linux Basics
2. Users, groups, permissions (Linux)
3. Access control and rootly powers (Linux)
4. Processes (Linux)
5. Software management (Linux)
6. Bash – programming basics (Linux)
7. Processes and Daemons (Linux)
8. Services (Windows)
9. Network Configuration (Linux)
10. Syslog (Linux)
11. System event logging (Windows)
12. Users, groups, permissions (Windows)

Bibliography:

[1]A. Silberschatz, G. Gagne, and P. B. Galvin, Operating System Concepts, 10th ed. Wiley, 2021.
[2]A. S. Tanenbaum and H. Bos, Modern Operating Systems, 5th ed. Pearson Education, 2023.
[3]W. Stallings, Operating Systems: Internals and Design Principles, Global Edition. Pearson, 2017.
[4]W. R. Stevens and S. A. Rago, Advanced Programming in the UNIX Environment. Addison-Wesley, 2008.

Learning outcomes:

Skills:
1. Student acquires practical knowledge about Linux and
Windows operating systems. (K1A_U01, K1A_U21)
2. Student acquires knowledge and basic skills in installation and configuring operating systems.(K1A_U21)
3. Student acquires knowledge and basic skills in administering and managing operating systems.(K1A_U08, K1A_U21)
4. Student acquires knowledge and basic skills in reading reference literature and technical documentation.(K1A_U01, K1A_U21)

Assessment methods and assessment criteria:

Lab:
Written test with open questions or multiple choice questions
Passing criteria: minimum 50% of correct answers

Exam:
Written exam, after passing both Lecture and Lab parts, with open questions or multiple choice questions
Passing criteria: minimum 50% of correct answers

The syllabus is valid from academic year 2025/26 and its content cannot be changed during the semester.

Course credits in various terms:

<without a specific program>

Type of credits	Number	First term	Last term
European Credit Transfer System (ECTS)	3	2020/2021-Z	

Informatics, full-time first degree engineering studies 7 sem. (InfAAu-SI7)			
Type of credits	Number	First term	Last term
European Credit Transfer System (ECTS)	3	2020/2021-Z	