SYLLABUS

Name: ***Operating systems (AEIAu>SI6OS23)***
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=202

Short description:

The goal of a course is to introduce students into the contemporary operating systems, which are considered as environments of effective resource managing and user interface layer in modern computer systems. During the course students will get knowledge on configuring and administering of operating systems and on the solutions of classical resource management problems with special focus on CPU and memory related tasks.

Form of class: face-to-face.

Description:

During the course the students will be introduced into the design and utilization of operating systems, considering both theoretical and practical approach. The covered topics are related to the general purpose OS. They are also related to the general problems occurring in any kind of OS. These are: Basic concepts in OS topic, OS structures, Resource management and Inter process communication (IPC), concurrency, CPU time sharing, Memory management, I/O, File systems and mass storage, basics of real time-systems, networked and distributed OS, examples of contemporary operating systems.

ECTS: 4
Total workload: 100 (60 contact hours / 40 student's own work hours)
Lecture: 30h
Laboratory: 30h
Student's own work: preparation for classes

Bibliography:

1. A. Silberschatz, J.L. Peterson, G. Gagne, Operating Systems Concepts, Wiley
2. W. Stallings, Operating Systems. Pearson
3. A. S. Tanenbaum, Modern Operating Systems. ed 2, Prentice-Hall Inc., 2001.
4. W. R. Stevens, Advanced Programming in the UNIX Environment, Addison-Wesley, 1992

Learning outcomes:

Student acquires knowledge on fundamentals of operating systems K1A_W10
Student gets the knowledge on a use-cycle of OS and its components K1A_W14
Student acquires practical skills in Linux and Windows OS K1A_U22
Student gets the skills in acquiring information from technical documentation and literature K1A_U01

Assessment methods and assessment criteria:

The final grade is obtained during the written exam comprising lecture and laboratory parts. To pass it is necessary to obtain at least 50% of points.

The syllabus is valid from the 6th semester / academic year 2025/2026 and its content is not subject to change 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)	4	2023/2024-Z	