Course title:	**Operating systems**			
Course code	***Course status***	***Semester***	***Number of ECTS credits***	***Teaching hours***
131105061	**Mandatory**	**V**	**4**	**2+0+2**

Study program:
Basic academic studies, ELECTRICAL ENGINEERING, study program: Electronics, Telecommunications and Computer engineering (studies last for 6 semesters, 180 ECTS credits).

Prerequisites:
No prerequisites required.

Course aims:
Introduction to a concept, significance and properties of modern operating systems. Studying of the operating systems structure, principles of their functioning, problems related to the operating systems creating as well as the ways to resolve these problems. Part of the course is dedicated to the practical work with the most frequently used operating systems (Linux and Windows). Basic computer architecture knowledge is assumed.

Teacher(s) and assistant(s) first and last names:
Ph.D. Božo Krstajić - teacher

Studying method:
Lectures, laboratory exercises, individual work on practical tasks, consultations.

Course synopsis:

Preliminary weeks	Preparation and semester enrollment.
I week	Introduction to operating systems. Properties and parts of modern operating systems.
II week	Windows OS – performance, installation, interface and instructions.
III week	Processes and threads. Windows OS.
IV week	File system management - principles, characteristics and examples (FAT, NTFS, ext2, ...). Windows OS.
V week	Memory management and virtual memory. Windows OS.
VI week	***First test***
VII week	***Free week***
VIII week	Input-output management.
IX week	Linux – performance, installation, interface and instructions.
X week	CPU management. Linux.
XI week	Live and deadlocks. Linux.
XII week	Operating systems security. Linux.
XIII week	***Second test***
XIV week	Operating systems administration. Linux.
XV week	Programming in Bash shell. Linux.
XVI week	***Final exam***
Final week	Administrative procedures.
XVIII-XXI week	Additional lessons, correction of the final exam and administrative procedures.

STUDENT WORKLOAD

per week	per semester
Working hours: **4** credits x **40/30** = **5** hours and **20** min. **Working hours structure**: **2** hours for teaching **1** hour for laboratory exercises **2** hours and **20** minutes for individual work, including consultations.	**Teaching and the final exam**: (**5.33** hours) x **16** = **85** hours and **20** minutes. **Necessary preparation** (before semester): **2** x (**5.33** hours) = **10** hours and **40** minutes. **Total work hours for the course**: **4** x **30** hours = **120** hours **Additional hours** for preparing correction of the final exam, including the exam taking: up to **24** hours. **Work hours structure**: 85 hours and 20 minutes (lectures) + 10 hours and 40 minutes (preparation) + 24 hours (additional work)

Lessons attendance is mandatory for students, as well as doing home and laboratory exercises, and both tests.

Literature: Božo Krstajić, Operativni sistemi, Handout, Podgorica 2005 (www.os.cg.ac.yu)
Božo Krstajić, Operativni sistemi, Lectures in electronic form, Podgorica 2005 (www.os.cg.ac.yu)

The forms of knowledge testing and grading:
- Control tests, home and laboratory exercises carry **10** points total.
- Each test carries **20** points (**40** points total).
- Final exam carries **50** points.

Special remarks for the course: The teaching is organized for student groups with approximately 40 students, and laboratory exercises for groups with 40 students. The same course is taught at the University in Skadar, Albania, and therefore can be also taught in English.

Teacher(s) who provided the information: Ph.D. Božo Krstajić

Remark: