

Reliability and diagnostics of the digital systems

Lecture notes for course PA175

16st Sep. – 16th Dec. 2019 (Monday)
13 standard teaching weeks

Course of the study:

- lessons, self-study and short presentation
- 2-3 written tests

Prerequisites for the final exam:

- successful passing written tests
- or
- successful processing of the final test

Lessons of the course

1. Introduction to the study
2. Control of the reliability
3. Numeric Characteristics of the Reliability
4. Classification of the redundancy
5. The static and dynamic redundancy
6. Introduction to the Digital Systems Diagnostics
7. Design of the Test Step
8. Design of the Test Step by D-algorithm
9. Design of the go-no-go and localization tests
10. The checking circuits
11. Diagnostics of the digital systems
12. Digital systems built-in diagnostics
13. Diagnostic tools and equipment
14. Built-in diagnostics of the PCs

Proposal of examination:

- 16th Dec 2019 - tutorial or preliminary exam, time 18:00, place B411 (A415)
- 20th Jan 2020 - regular examination date, time 9:00, place A415
- 27th Jan 2020 - regular examination date, time 9:00, place A415
- 3rd Feb 2020 - regular and repeat the test date, time 9:00, place A415

Assessment of the study:

homeworks - max 70 points
or final written exam - max 70 points
oral exam - max 30 points

passing boundary for ECTS assessment - 51 points

rating:

A = 91-100

B = 81-90

C = 71-80

D = 61-70

E = 51-60

F = 0-50