**Electrical measurements (ECTS credits: 6)**

Language: the course is offered in English, Serbian and Hungarian.

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**Course description:**

The course covers basic topics of metrology, electrical measurements, and operation of electrical instruments.

The course covers the following topics: basic terms of metrology, measurement errors, processing of measurement results, measuring equipment, basic analog circuits, A/D and D/A converters, measurement of electrical quantities, electronic measurement of non-electric quantities, used characteristics of instruments.

The course would cover the following topics, both as lectures and exercises:

1. Introduction to metrology
2. Basic terms of metrology
3. Measurement errors
4. Characteristics of measuring equipment
5. Measurement systems
6. Processing of measurement results
7. Electrical measuring instruments
8. Measurements with analog measuring instruments
9. A/D and D/A converters
10. Measurements with digital measuring instruments
11. Measurement of electric quantities in single-phase systems
12. Measurement of electric quantities in three-phase systems
13. Electronic measurement of non-electric quantities
14. Written examination
15. Repeat. Conclusion of the semester

**Aims:**

The goals of the course are to introduce students with the terms of metrology, methods of electrical measurements, and operation of electrical instruments.

Upon completion, the students should be able to understand electrical measurement systems, use electrical measurement instruments, make electrical measurements, and process measurement results.