**Electrotechnics 2 (ECTS credits: 6)**

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

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**Course description:**

The course covers the basic concepts of electromagnetic field theory. It includes a description of phenomena that occur in the presence of an electromagnetic field.

This short course covers the following topics, both as lectures and exercises:

1. Introduction to electrostatic field
2. Coulomb’s law, electric field, electric potential
3. Gauss’s law and electric flux
4. Conductor in electric field
5. Insulator in electric field
6. Energy and work in electric field
7. Electrostatic field exam
8. Introduction to magnetic field
9. Biot-Savart law, vector of magnetic induction
10. Ampere’s law, magnetic materials
11. Electromagnetic induction
12. Magnetic circuit
13. Magnetically coupled circuit
14. Energy and work in magnetic field
15. Magnetic field exam

**Aims:**

The goals are the following:

Understanding the basic concepts of electromagnetic field for describing the electromagnetic phenomena.