**Complex system design (ECTS 6)**

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

**Course description:**

The course covers the aspects of designing of complex systems - mechatronic systems. The design process is discussed in detail. The process of analysis and synthesis during the design process is discussed. All design steps (problem definition. analysis, calculations, synthesis are discussed and integrated.

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

1. Introduction
2. Aspects of design
3. Design process - steps
4. Design process – steps
5. Analysis
6. Calculations
7. Iterative procedures in design
8. Synthesis
9. Design of a given complex system
10. Design of a given complex system
11. Design of a given complex system
12. Design of a given complex system
13. Design of a given complex system
14. Design of a given complex system
15. Closing remarks

**Aims:**

The goals are the following: - The students should understand the design process regarding a complex system. They should be able to design from scratch a complex system, which includes some, or all aspects of a mechatronic device, given a problem that should be solved. They should be able to produce the necessary documentation, mechanical, electrical, and control.