**Mechatronic structures (ECTS 3)**

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Language: the course is offered in Serbian and Hungarian.

**Course description:**

The course covers the basic aspect of mechatronics. The definition of mechatronics is discussed in detail. The mechanical, electrical, informatics, organizational and other aspects of mechatronics are discussed both separately and together. The basics of System engineering is discussed too.

This course would cover the following topics as lectures:

1. Introduction
2. Definition of mechatronics
3. Analysis of mechatronic devices
4. Mechanical aspects of mechatronics
5. Electrical aspects of mechatronics
6. Informatics aspects of mechatronics
7. Fundamentals of System engineering
8. Synthesis of mechatronic systems
9. Control aspects of mechatronics
10. Processes including mechatronic devices
11. Control aspects of processes
12. Project work
13. Project work
14. Project work
15. Closing remarks

**Aims:**

The goals are the following: - The students should understand mechatronics as an approach. They should be able to analyze such system, and to make a synthesis of a mechatronic system. The students should be able to design a simple process including mechatronic devices. They should be able to design a mechatronic system from the given elements.