**Statics (ECTS 5)**

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Language: the course is offered in Serbian and Hungarian.

**Course description:**

The course covers the basic aspects of statics. The following topics are discussed: definition of physics-mechanics-statics, the vectors, the principles of statics, rigid body, the state of mechanical equilibrium, and the line carriers, lattice carriers, frames. Moreover, the loading of carriers, the center of gravity, moments of inertia, statically determined vs statically undetermined carriers are also discussed.

This course would cover the following topics as lectures:

1. Introduction
2. Definition of statics
3. Vector algebra
4. Rigid body
5. Principles of statics
6. Equilibrium
7. Line carriers
8. Frames
9. Lattice carriers
10. Loading
11. Loading
12. Center of gravity
13. Moments of inertia
14. Statically determined and undetermined cases.
15. Closing remarks

**Aims:**

The goals are the following: - The students should be able to understand the principle of statics along with the effects of loads on a rigid body. They should be able to both calculate the loading for different kinds of carriers and to calculate the center of gravity for complex shapes, and also moments of inertia. Moreover, they should be able to determine whether the system is statically determined or undetermined.