



# STATICS

Course code:	GKNB_AMTA001	Weekly contact hours:	2 lectures + 2 seminars
Program type:	BSc, regular	Requirement :	exam
Course responsible:	Dr. Máté Antali	Credit points:	5

## Course data sheet

#### Goal of the course

The course provides an introduction to the field of Applied Mechanics, and presents the modelling and calculation methods of Statics. By the description of the equilibrium of point masses, rigid bodies and structures, the students become capable to compute the forces and moments acting on parts and machines in being rest. The introcuded concepts and calculation methods are required to study the further courses in mechanics (most importantly, Strength of Materials, Dynamics).

### **Topics of the course**

The topics and the schedule of the course is announced by the lecture in the beginning of the semester.

The main topics are:

- Basic concepts of mechanics
- Statics of point masses
- Statics of rigid bodies
- Distributed forces, centre of gravity
- Statics of structures
- Conditional constraints
- Stress resultants in beams

#### **Recommended literature**

- Égert J. Pere B. Kupi G.: Statika, lecture notes, Universitas-Győr Nonprofit Kft., 2018. (in Hungarian)
- Gross, D. et. al.:Enigneering Mechanics 1: Statics, 2nd ed., Springer, 2013.
- Hibbeler, R.: Engineering Mechanics: Statics, 14th ed., Pearson, 2015.

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Dr. Máté Antali

senior research fellow, course responsible

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